

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 1 - Formulation of Detergents/Maintenance Products: Granular Detergent - Compact (large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (Large scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 1
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-M9.4, AISE-M2.4, AISE-M8.4, AISE-M3.4, AISE-M6.4, AISE-M5.4, AISE-M7.4, AISE-M1.4, AISE-M4.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*	
Further specification	: Specific Environmental Release Category: AISE SPERC Code 2.1.d.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 220

Environment factors not influenced by risk management	: River flow rate: 18000 m ³ per day
Other given operational conditions affecting environmental exposure	: 0.02% Release fraction to air from process. 0.001% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant AISE SPERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor use

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004403
 Freshwater sediments (mg/kg d.w.) : 0.016107
 Marine water (mg/l) : 0.000556
 Marine water sediments (mg/kg d.w.) : 0.002034
 Agricultural soil (mg/kg dwt): 0.008574
 Grassland (mg/kg dwt): 0.008577
 Sewage Treatment Plant (mg/l) : 0.000404

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 2 - Formulation of Detergents/Maintenance Products: Granular Detergent - Compact (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (Medium scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15

Substance supplied to that use in form of: As such, In a mixture

Sector of end use: SU03

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 2

Industry Association : AISE

Additional information : Site 1 + 2

AISE-M3.5, AISE-M7.5, AISE-M5.5, AISE-M6.5, AISE-M9.5, AISE-M4.5, AISEM1.5, AISE-M8.5, AISE-M2.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.e.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Date of issue/Date of revision : ^(ES Revision date)

30/934

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0.02% Release fraction to air from process.
0.01% Release fraction to surface water from process.
0% Release fraction to soil from process.
99% Fraction used at main source.
100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant AISE SPERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent**Further specification** : Same for all PROC.**Frequency and duration of use** : Duration of activity >4 hours**Other given operational conditions affecting workers exposure** : Indoor**Conditions and measures related to personal protection and hygiene****Section 3 - Exposure estimation and reference to its source****Website:** : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004763
Freshwater sediments (mg/kg d.w.) : 0.017423
Marine water (mg/l) : 0.000592
Marine water sediments (mg/kg d.w.) : 0.002166
Agricultural soil (mg/kg dwt): 0.008579
Grassland (mg/kg dwt): 0.008577
Sewage Treatment Plant (mg/l) : 0.004003**Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

SILIPON RN6068

ES 2 - Formulation of Detergents/Maintenance Products:
Granular Detergent -Compact (medium scale) -
Industrial - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 3 - Formulation of Detergents/Maintenance Products: Granular Detergent - Compact (small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: Granular Detergent -Compact (Small scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 3

Industry Association : AISE

Additional information : Site 1 + 2

AISE-M9.6, AISE-M1.6, AISE-M2.6, AISE-M8.6, AISE-M4.6, AISE-M3.6, AISEM7.6, AISE-M5.6, AISE-M6.6

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.f.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Date of issue/Date of revision : ^(ES Revision date)

36/934

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0.02% Release fraction to air from process.
0.02% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.02% Fraction used at main source.
100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)**

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)**

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation**

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent**

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE>:
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004365
 Freshwater sediments (mg/kg d.w.) : 0.015965
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.00202
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000018

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 4 - Formulation of Detergents/Maintenance Products: Granular Detergent - Regular (large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (Large scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 4
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-M8.1, AISEM9.1, AISE-M5.1, AISE-M1.1, AISE-M7.1, AISE-M3.1, AISE-M6.1, AISE-M4.1, AISE-M2.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.a.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Date of issue/Date of revision : ^(ES Revision date)

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Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0.02% Release fraction to air from process. 0.01% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004767 Freshwater sediments (mg/kg d.w.) : 0.017438 Marine water (mg/l) : 0.000592 Marine water sediments (mg/kg d.w.) : 0.002167 Agricultural soil (mg/kg dwt): 0.008579 Grassland (mg/kg dwt): 0.008577 Sewage Treatment Plant (mg/l) : 0.004044
Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.123333 Combined routes (mg/kg bw/day): 0.360476
Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133
Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 37 Combined routes (mg/kg bw/day): 5.629
Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 5 - Formulation of Detergents/Maintenance Products: Granular Detergent - Regular (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (Medium scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 5
Industry Association : AISE
Additional information : Site 1 + 2
AISE-M5.2, AISE-M3.2, AISE-M8.2, AISE-M1.2, AISE-M7.2, AISE-M4.2, AISEM9.2, AISE-M2.2, AISE-M6.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.b.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068	ES 5 - Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0.02% Release fraction to air from process. 0.1% Release fraction to surface water from process. 0% Release fraction to soil from process. 99% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Date of issue/Date of revision	: ^(ES Revision date)

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE>:
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration ::
 Freshwater (mg/l) 0.008366
 Freshwater sediments (mg/kg d.w.) : 0.030602
 Marine water (mg/l) : 0.000952
 Marine water sediments (mg/kg d.w.) : 0.003484
 Agricultural soil (mg/kg dwt): 0.008629
 Grassland (mg/kg dwt): 0.00858
 Sewage Treatment Plant (mg/l) : 0.040034

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 6 - Formulation of Detergents/Maintenance Products: Granular Detergent - Regular (small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (Small scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 6
Industry Association : AISE
Additional information : Site 1 + 2 AISE-M8.3, AISE-M9.3, AISE-M3.3, AISE-M2.3, AISE-M5.3, AISE-M7.3, AISEM6.3, AISE-M4.3, AISE-M1.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.c.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Date of issue/Date of revision : ^(ES Revision date)

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Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0.02% Release fraction to air from process.
0.2% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.02% Fraction used at main source.
100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant AISE SPERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE>:
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration ::
 Freshwater (mg/l) 0.004381
 Freshwater sediments (mg/kg d.w.) : 0.016024
 Marine water (mg/l) : 0.000554
 Marine water sediments (mg/kg d.w.) : 0.002026
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000178

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 7 - Formulation of liquid Detergents/Maintenance Products: High Low Viscosity (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: High Low Viscosity (Medium scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 7

Industry Association : AISE

Additional information : Site 1 + 2

AISE-M6.11, AISEM1.11, AISE-M4.11, AISE-M8.11, AISE-M5.11, AISE-M7.11, AISEM3.11, AISE-M9.11, AISE-M2.11

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.k.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.2% Release fraction to surface water from process. 0% Release fraction to soil from process. 99% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant AISE SPERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration ::
 Freshwater (mg/l) 0.01237
 Freshwater sediments (mg/kg d.w.) : 0.045245
 Marine water (mg/l) : 0.001353
 Marine water sediments (mg/kg d.w.) : 0.004948
 Agricultural soil (mg/kg dwt): 0.008681
 Grassland (mg/kg dwt): 0.008578
 Sewage Treatment Plant (mg/l) : 0.080068

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 7 - Formulation of liquid Detergents/Maintenance Products: High Low Viscosity (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 8 - Formulation of liquid Detergents/Maintenance Products: High Viscosity (large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: High Low Viscosity (Large scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 8
Industry Association : AISE
Additional information : Site 1 + 2

AISE-M1.10, AISE-M9.10, AISEM3.10, AISE-M2.10, AISE-M7.10, AISE-M8.10, AISE-M6.10, AISEM5.10, AISE-M4.10

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.j.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure

: 0% Release fraction to air from process.
 0.1% Release fraction to surface water from process.
 0% Release fraction to soil from process.
 100% Fraction used at main source.
 100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil

: See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant

: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure**Further specification**

: Same for all PROC.

Frequency and duration of use

: Duration of activity >4 hours

Other given operational conditions affecting workers exposure

: Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure****Further specification**

: Same for all PROC.

Frequency and duration of use

: Duration of activity >4 hours

Other given operational conditions affecting workers exposure

: Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)****Further specification**

: Same for all PROC.

Frequency and duration of use

: Duration of activity >4 hours

Other given operational conditions affecting workers exposure

: Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises****Further specification**

: Same for all PROC.

Frequency and duration of use

: Duration of activity >4 hours

Other given operational conditions affecting workers exposure

: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :: Freshwater (mg/l) 0.008407 Freshwater sediments (mg/kg d.w.) : 0.03075 Marine water (mg/l) : 0.000956 Marine water sediments (mg/kg d.w.) : 0.0003498 Agricultural soil (mg/kg dwt): 0.008626 Grassland (mg/kg dwt): 0.008574 Sewage Treatment Plant (mg/l) : 0.040438
Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.123333 Combined routes (mg/kg bw/day): 0.360476
Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133
Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 37 Combined routes (mg/kg bw/day): 5.629
Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 9 - Formulation of liquid Detergents/Maintenance Products: High Viscosity (small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: High Viscosity (Small scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 9
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-M2.12, AISE-M3.12, AISE-M7.12, AISE-M5.12, AISE-M4.12, AISE-M6.12, AISE-M1.12, AISE-M9.12, AISE-M8.12

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.l.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.4% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.02% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
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Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004399 Freshwater sediments (mg/kg d.w.) : 0.016089 Marine water (mg/l) : 0.000556 Marine water sediments (mg/kg d.w.) : 0.002032 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.000356

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.123333 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 37 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 10 - Formulation of liquid Detergents/Maintenance Products: Low Viscosity (large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: Low Viscosity (Large scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 10
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-M9.7, AISE-M7.7, AISEM8.7, AISE-M1.7, AISE-M6.7, AISE-M4.7, AISE-M5.7, AISE-M2.7, AISE-M3.7

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.g.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.01% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant AISE SPERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
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Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004767 Freshwater sediments (mg/kg d.w.) : 0.017438 Marine water (mg/l) : 0.000592 Marine water sediments (mg/kg d.w.) : 0.002167 Agricultural soil (mg/kg dwt): 0.008576 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.004044

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.12333 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 37 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 11 - Formulation of liquid Detergents/Maintenance Products: Low Viscosity (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: Low Viscosity (Medium scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 11
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-M9.8, AISE-M6.8, AISEM8.8, AISE-M5.8, AISE-M2.8, AISE-M7.8, AISE-M3.8, AISE-M1.8, AISE-M4.8

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.h.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.1% Release fraction to surface water from process. 0% Release fraction to soil from process. 99% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant AISE SPERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE>:
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.008366
 Freshwater sediments (mg/kg d.w.) : 0.030602
 Marine water (mg/l) : 0.000952
 Marine water sediments (mg/kg d.w.) : 0.003484
 Agricultural soil (mg/kg dwt): 0.008626
 Grassland (mg/kg dwt): 0.008574
 Sewage Treatment Plant (mg/l) : 0.040034

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 12 - Formulation of liquid Detergents/Maintenance Products: Low Viscosity (small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Detergents/Maintenance Products: Low Viscosity (Small scale) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 12
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-M4.9, AISE-M7.9, AISEM2.9, AISE-M9.9, AISE-M5.9, AISE-M3.9, AISE-M6.9, AISE-M1.9, AISE-M8.9

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
AISE SPERC Code 2.1.i.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure

: 0% Release fraction to air from process.
 0.2% Release fraction to surface water from process.
 0% Release fraction to soil from process.
 0.02% Fraction used at main source.
 100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil

: See relevant AISE SPERC factsheet.

Conditions and measures related to municipal sewage treatment plant

: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure**Further specification**

: Same for all PROC.

Frequency and duration of use

: Duration of activity >4 hours

Other given operational conditions affecting workers exposure

: Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure****Further specification**

: Same for all PROC.

Frequency and duration of use

: Duration of activity >4 hours

Other given operational conditions affecting workers exposure

: Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)****Further specification**

: Same for all PROC.

Frequency and duration of use

: Duration of activity >4 hours

Other given operational conditions affecting workers exposure

: Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises****Further specification**

: Same for all PROC.

Frequency and duration of use

: Duration of activity >4 hours

Other given operational conditions affecting workers exposure

: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004381 Freshwater sediments (mg/kg d.w.) : 0.016024 Marine water (mg/l) : 0.000554 Marine water sediments (mg/kg d.w.) : 0.002026 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.000178
Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.123333 Combined routes (mg/kg bw/day): 0.360476
Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133
Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 37 Combined routes (mg/kg bw/day): 5.629
Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 13 - Industrial Use of Me-salts in conversion coating - Nickel - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial Use of Me-salts in conversion coating - Nickel - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC08a, PROC08b, PROC10
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC14

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix - ERC05**

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10

Number of the ES	: 13
Industry Association	: AISE
Additional information	: Site 1 + 2
	AISE-P1001b.1.1, AISE-P1001a.2.1, AISE-P1001b.2.1, AISE-P1001a.1.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: AISE SPERC Code 5.1.a.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 1.1% Fraction used at main source. 100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use : Duration of activity: 480 minutes per day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity: 15 minutes per day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 15 - 60 minutes.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity: 480 minutes per day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity: 480 minutes per day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE/>
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.006587
 Freshwater sediments (mg/kg d.w.) : 0.0024094
 Marine water (mg/l) : 0.000774
 Marine water sediments (mg/kg d.w.) : 0.002833
 Agricultural soil (mg/kg dwt): 0.008601
 Grassland (mg/kg dwt): 0.008573
 Sewage Treatment Plant (mg/l) : 0.022241

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.027429
 Inhalation exposure (mg/m³) : 1.233
 Combined routes (mg/kg bw/day): 0.203619

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.027429
 Inhalation exposure (mg/m³) : 0.385417
 Combined routes (mg/kg bw/day): 0.082488

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 1.85
Combined routes (mg/kg bw/day): 0.401429

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.274286
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 2.036

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 14 - Industrial Use of Me-salts in conversion coating - Zinc, Chromium, Copper, Manganese - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial Use of Me-salts in conversion coating - Zinc, Chromium, Copper, Manganese - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC08a, PROC08b, PROC10
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC14

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix - ERC05**

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10

Number of the ES	: 14
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-P1001a.2.2, AISEP1001b.2.2, AISE-P1001a.1.2, AISE-P1001b.1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix

Further specification : Specific Environmental Release Category:
AISE SPERC Code 5.1.b.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m³/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
1% Release fraction to surface water from process.
0% Release fraction to soil from process.
1.1% Fraction used at main source.
100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use : Duration of activity: 480 minutes per day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity: 15 minutes per day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 15 - 60 minutes.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity: 480 minutes per day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity: 480 minutes per day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004808
Freshwater sediments (mg/kg d.w.) : 0.017586
Marine water (mg/l) : 0.000597
Marine water sediments (mg/kg d.w.) : 0.002182
Agricultural soil (mg/kg dwt): 0.008577
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.004448

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.203619

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 0.385417
Combined routes (mg/kg bw/day): 0.082488

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 1.85
Combined routes (mg/kg bw/day): 0.401429

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.274286
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 2.036

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 15 - Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Process Category: PROC07, PROC08b, PROC09, PROC10, PROC13

Substance supplied to that use in form of: As such, In a mixture

Sector of end use: SU03

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC04

Market sector by type of chemical product: PC24

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC07: Industrial spraying** - PROC07
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES : 15

Industry Association : ATIEL/ATC

Additional information : Site 1 + 2

ATIEL-Group_CI1.5, ATIELGroup_CI1.4, ATIEL-Group_CI1.3, ATIEL-Group_CI1.2.1, ATIELGroup_CI1.1, ATIEL-Group_CI1.2.2, ATIEL-Group_CI1.6

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Amounts used : 2 Tonnes/year

Frequency and duration of use : Release times per year: 20

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
100% Release fraction to surface water from process.
5% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068

ES 15 - Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity: >4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity: >4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity: >4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity: >4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

SILIPON RN6068

ES 15 - Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity: >4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.003456
Agricultural soil (mg/kg dwt): 0.009824
Grassland (mg/kg dwt): 0.008709
Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 60.476

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

SILIPON RN6068

ES 15 - Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 45.048

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 16 - Blending - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Blending - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC20, PC23, PC24, PC32, PC34

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05

Number of the ES	: 16
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-T1.2, TEGEWA-L1.1, TEGEWA-T1.1, TEGEWA-F2.1, TEGEWA-L1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 2.5% Release fraction to air from process. 2% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: <u>Sub-scenario(s)</u> : 1- Use of textile chemicals (auxiliaries) to prepare in-house formulations ready to use. 2- Use of leather chemicals to prepare in-house formulations ready to use, Without LEV. 3- Use of textile chemicals (dyes) to prepare in-house formulations ready to use. 4- Use of chemicals to prepare in-house formulations ready to use. 5- Use of leather chemicals to prepare in-house formulations ready to use, with local exhaust ventilation.
Frequency and duration of use	: Duration of activity / Sub-scenario(s): 1; 2; 3; 5- 60 min/day 4- > 4 hours per day
Other given operational conditions affecting workers exposure	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Sub-scenario(s) 1; 2; 4; 5 : Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1- 4 hour(s).
Respiratory protection	: Sub-scenario(s) 1: Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.075534 Freshwater sediments (mg/kg d.w.) : 0.276285 Marine water (mg/l) : 0.007669 Marine water sediments (mg/kg d.w.) : 0.028052 Agricultural soil (mg/kg dwt): 0.009702 Grassland (mg/kg dwt): 0.00893 Sewage Treatment Plant (mg/l) : 0.711711

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
	: <u>Sub-scenario(s)</u> : 1- Use of textile chemicals (auxiliaries) to prepare in-house formulations ready to use. 2- Use of leather chemicals to prepare in-house formulations ready to use, Without LEV. 3- Use of textile chemicals (dyes) to prepare in-house formulations ready to use. 4- Use of chemicals to prepare in-house formulations ready to use. 5- Use of leather chemicals to prepare in-house formulations ready to use, with local exhaust ventilation.

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day):
Sub-scenario(s) 1; 5 : 2.743
Sub-scenario(s) 2; 3; 4 : 0.013714
Inhalation exposure (mg/m³) :
Sub-scenario(s) 1; 2; 3 : 0.770833
Sub-scenario(s) 4 : 6.167
Sub-scenario(s) 5 : 7.708
Combined routes (mg/kg bw/day):
Sub-scenario(s) 1: 2.853
Sub-scenario(s) 2; 3 : 0.12833
Sub-scenario(s) 4 : 0.894667
Sub-scenario(s) 5 : 3.844

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 17 - Bulk loading (including marine vessel/barge, rail car and IBC loading) and repacking (including drums and small packs), including losses during off-site storage (e.g. terminals) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Bulk loading (including marine vessel/barge, rail car and IBC loading) and repacking (including drums and small packs), including losses during off-site storage (e.g. terminals) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06a

Environmental contributing scenarios : **ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)** - ERC06a

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 18
Industry Association : Concawe
Additional information : Site 1 + 2

CONCAWE1A.7, CONCAWE1A.8, CONCAWE1A.5, CONCAWE1A.3,
CONCAWE1A.6, CONCAWE1A.4, CONCAWE1A.2, CONCAWE1A.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)**

Further specification : Specific Environmental Release Category:
ESVOC SPERC Code 1.1b.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 300

SILIPON RN6068 *ES 17 - Bulk loading (including marine vessel/barge, rail car and IBC loading) and repacking (including drums and small packs), including losses during off-site storage (e.g. terminals) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts*

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0.1% Release fraction to air from process.
0.001% Release fraction to surface water from process.
0.001% Release fraction to soil from process.
0.2% Fraction used at main source.
100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Local Risk Management Measures (RMM) effectiveness:
- Air: 0%
- Soil: 0%
- Water: 98%

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

SILIPON RN6068

ES 17 - Bulk loading (including marine vessel/barge, rail car and IBC loading) and repacking (including drums and small packs), including losses during off-site storage (e.g. terminals) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.015959
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l): 5.93x10⁻⁷

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

SILIPON RN6068	ES 17 - Bulk loading (including marine vessel/barge, rail car and IBC loading) and repacking (including drums and small packs), including losses during off-site storage (e.g. terminals) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
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Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³) : 123.333 Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 18 - Formulation of Liquid Coatings and Inks (where specific use not known) - Solids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of liquid coatings and inks (where specific use not known) - Solids - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES : 18
Industry Association : CEPE
Additional information : Site 1 + 2

CEPE-MS0054/MW0054.3, CEPE-MS0072/MW0072.3, CEPE-MS0044/MW0044.3, CEPEMS0027/MW0027.3, CEPE-MS0032/MW0032.3, CEPEMS0026/MW0026.3, CEPE-MS0112/MW0112.3, CEPEMS0052/MW0052.3, CEPE-MS0034/MW0034.3, CEPEMS0091/MW0091.3, CEPE-MS0012/MW0012.3, CEPEMS0092/MW0092.3, CEPE-MS0111/MW0111.3, CEPEMS0041/MW0041.3, CEPE-MS0053/MW0053.3, CEPEMS0070/MW0070.3, CEPE-MS0073/MW0073.3, CEPEMS0028/MW0028.3, CEPE-MS0025/MW0025.3, CEPEMS0042/MW0042.3, CEPE-MS0011/MW0011.3, CEPEMS0051/MW0051.3, CEPE-MS0033/MW0033.3, CEPEMS0043/MW0043.3, CEPE-MS0035/MW0035.3, CEPEMS0013/MW0013.3, CEPE-MS0024/MW0024.3, CEPEMS0015/MW0015.3, CEPE-MS0071/MW0071.3, CEPEMS0014/MW0014.3, CEPE-MS0021/MW0021.3, CEPEMS0023/MW0023.3, CEPE-MS0022/MW0022.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification	: Specific Environmental Release Category: CEPE SPERC Code 2.2a.v1 (CEPE M4)
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 225
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0.01% Release fraction to air from process. 0.5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Raw material dispensing of solids / Raw material dispensing of liquids via pipeline from bulk storage: - Without LEV Outdoor - with local exhaust ventilation Indoor
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: - Without LEV Outdoor - with local exhaust ventilation Indoor
Technical conditions and measures to control dispersion from source towards the worker	: - Without LEV Outdoor - with local exhaust ventilation Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure**

Further specification	: <u>Sub-scenario(s)</u> : 1- Mixing; milling; dispersing; completion - closed continuous process 2- enclosed off-line in workplace 3- enclosed in situ in workplace
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Sub-scenario(s):
 1- solvent recovery using condensation or adsorption / desorption processes
 2- Mixing; milling; dispersing; completion - closed batch process
 3- Packaged goods delivery Outdoor
 4- Raw material storage - Outdoor
 5- Storage of waste prior to removal for off-site management
 6- Raw material storage - Indoor

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Sub-scenario(s) 2; 6 : Indoor
 Sub-scenario(s) 1; 3; 4; 5 : Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) 2; 6 : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 1; 2 : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Sub-scenario(s) 1; 2 : Wear respiratory protection:90%.

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor with LEV (Local Exhaust Ventilation) or Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) Indoor: Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.024133
 Freshwater sediments (mg/kg d.w.) : 0.088271
 Marine water (mg/l) : 0.002529
 Marine water sediments (mg/kg d.w.) : 0.009251
 Agricultural soil (mg/kg dwt): 0.008844
 Grassland (mg/kg dwt): 0.008591
 Sewage Treatment Plant (mg/l) : 0.197698

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 respectively [Indoor; Outdoor]
 Dermal exposure (mg/kg bw/day): [0.034286; 0.342857]
 Inhalation exposure (mg/m³) : [0.123333; 0.086333]
 Combined routes (mg/kg bw/day): [0.051905; 0.35519]

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.045048

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):
1- solvent recovery using condensation or adsorption / desorption processes
2- Mixing; milling; dispersing; completion - closed batch process
3- Packaged goods delivery Outdoor
4- Raw material storage - Outdoor
5- Storage of waste prior to removal for off-site management
6- Raw material storage - Indoor

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day):
Sub-scenario(s) 1 : 0.068571
Sub-scenario(s) 2 : 0.006857
Sub-scenario(s) 3; 4; 5 : 0.342857
Sub-scenario(s) 6 : 0.034286
Inhalation exposure (mg/m³) :
Sub-scenario(s) 1 : 2.59
Sub-scenario(s) 2 : 0.370
Sub-scenario(s) 3; 4; 5 : 25.9
Sub-scenario(s) 6 : 3.7
Combined routes (mg/kg bw/day):
Sub-scenario(s) 1 : 0.438571
Sub-scenario(s) 2 : 0.059714
Sub-scenario(s) 3; 4; 5 : 4.043
Sub-scenario(s) 6 : 0.562857

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.013714
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.10181

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.203619

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- Raw material dispensing of solids manually from bulk storage or packaged goods Indoor
- 2- Raw material dispensing of liquids manually from bulk storage or packaged goods Outdoor
- 3- Opening of manufacturing equipment and pipework containing chemicals for repair
- 4- bulk raw material delivery (Pigments/extenders) - Outdoor
- 5- cleaning manufacturing equipment for maintenance purposes
- 6- Transfer of process wastes to storage containers off-line in workplace
- 7- Transfer of recovered solvent into bulk storage tanks or IBCs
- 8- Raw material dispensing of solids manually from bulk storage or packaged goods - Outdoor
- 9- Raw material dispensing of liquids manually from bulk storage or packaged goods Indoor
- 10- bulk raw material delivery (Solvents/resins) - Outdoor

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

Sub-scenario(s) 1; 3; 5; 6; 9 : 0.137143

Sub-scenario(s) 2; 7; 8 : 1.371

Sub-scenario(s) 4; 10 : 1.371

Inhalation exposure (mg/m³) :

Sub-scenario(s) 1; 3; 5; 6; 9 : 0.185

Sub-scenario(s) 2; 7; 8 : 4.317

Sub-scenario(s) 4; 10 : 43.167

Combined routes (mg/kg bw/day):

Sub-scenario(s) 1; 3; 5; 6; 9 : 0.163571

Sub-scenario(s) 2; 7; 8 : 1.988

Sub-scenario(s) 4; 10 : 7.538

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day): 0.137143

Inhalation exposure (mg/m³) : 0.616667

Combined routes (mg/kg bw/day): 0.225238

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 19 - Formulation of Organic Solvent Borne Coatings and Inks - Solids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of organic solvent borne coatings and inks - Solids - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES : 19
Industry Association : CEPE
Additional information : Site 1 + 2

CEPE-MS0053/MW0053.1, CEPE-MS0111/MW0111.1, CEPEMS0032/MW0032.1, CEPE-MS0112/MW0112.1, CEPE-MS0044/MW0044.1, CEPEMS0054/MW0054.1, CEPE-MS0042/MW0042.1, CEPE-MS0035/MW0035.1, CEPEMS0070/MW0070.1, CEPE-MS0043/MW0043.1, CEPE-MS0033/MW0033.1, CEPEMS0041/MW0041.1, CEPE-MS0025/MW0025.1, CEPE-MS0072/MW0072.1, CEPEMS0092/MW0092.1, CEPE-MS0073/MW0073.1, CEPE-MS0027/MW0027.1, CEPEMS0026/MW0026.1, CEPE-MS0091/MW0091.1, CEPE-MS0012/MW0012.1, CEPEMS0028/MW0028.1, CEPE-MS0052/MW0052.1, CEPE-MS0051/MW0051.1, CEPEMS0011/MW0011.1, CEPE-MS0034/MW0034.1, CEPE-MS0024/MW0024.1, CEPEMS0021/MW0021.1, CEPE-MS0023/MW0023.1, CEPE-MS0014/MW0014.1, CEPEMS0071/MW0071.1, CEPE-MS0015/MW0015.1, CEPE-MS0022/MW0022.1, CEPEMS0013/MW0013.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification	: Specific Environmental Release Category: CEPE SPERC Code 2.2a.v1 (CEPE M1)
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 225
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0.01% Release fraction to air from process. 0.005% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet..
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Raw material dispensing of solids / Raw material dispensing of liquids via pipeline from bulk storage: - Without LEV Outdoor - with local exhaust ventilation Indoor
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: - Without LEV Outdoor - with local exhaust ventilation Indoor
Technical conditions and measures to control dispersion from source towards the worker	: - Without LEV Outdoor - with local exhaust ventilation Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure**

Further specification	: <u>Sub-scenario(s)</u> : 1- Mixing; milling; dispersing; completion - closed continuous process 2- enclosed off-line in workplace 3- enclosed in situ in workplace
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Sub-scenario(s):
 1- solvent recovery using condensation or adsorption / desorption processes
 2- Mixing; milling; dispersing; completion - closed batch process
 3- Packaged goods delivery Outdoor
 4- Raw material storage - Outdoor
 5- Storage of waste prior to removal for off-site management
 6- Raw material storage - Indoor

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Sub-scenario(s) 2; 6 : Indoor
 Sub-scenario(s) 1; 3; 4; 5 : Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) 2; 6 : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 1; 2 : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Sub-scenario(s) 1; 2 : Wear respiratory protection:90%.

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor with LEV (Local Exhaust Ventilation) or Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) Indoor: Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004561
Freshwater sediments (mg/kg d.w.) : 0.016682
Marine water (mg/l) : 0.000572
Marine water sediments (mg/kg d.w.) : 0.002092
Agricultural soil (mg/kg dwt): 0.008575
Grassland (mg/kg dwt): 0.008574
Sewage Treatment Plant (mg/l) : 0.001977

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Indoor; Outdoor]
Dermal exposure (mg/kg bw/day): [0.034286; 0.342857]
Inhalation exposure (mg/m³) : [0.123333; 0.086333]
Combined routes (mg/kg bw/day): [0.051905; 0.35519]

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.045048

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):
1- solvent recovery using condensation or adsorption / desorption processes
2- Mixing; milling; dispersing; completion - closed batch process
3- Packaged goods delivery Outdoor
4- Raw material storage - Outdoor
5- Storage of waste prior to removal for off-site management
6- Raw material storage - Indoor

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day):
Sub-scenario(s) 1 : 0.068571
Sub-scenario(s) 2 : 0.006857
Sub-scenario(s) 3; 4; 5 : 0.342857
Sub-scenario(s) 6 : 0.034286
Inhalation exposure (mg/m³) :
Sub-scenario(s) 1 : 2.59
Sub-scenario(s) 2 : 0.370
Sub-scenario(s) 3; 4; 5 : 25.9
Sub-scenario(s) 6 : 3.7
Combined routes (mg/kg bw/day):
Sub-scenario(s) 1 : 0.438571
Sub-scenario(s) 2 : 0.059714
Sub-scenario(s) 3; 4; 5 : 4.043
Sub-scenario(s) 6 : 0.562857

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.013714
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.10181

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.203619

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- Raw material dispensing of solids manually from bulk storage or packaged goods Indoor
- 2- Raw material dispensing of liquids manually from bulk storage or packaged goods Outdoor
- 3- Opening of manufacturing equipment and pipework containing chemicals for repair
- 4- bulk raw material delivery (Pigments/extenders) - Outdoor
- 5- cleaning manufacturing equipment for maintenance purposes
- 6- Transfer of process wastes to storage containers off-line in workplace
- 7- Transfer of recovered solvent into bulk storage tanks or IBCs
- 8- Raw material dispensing of solids manually from bulk storage or packaged goods - Outdoor
- 9- Raw material dispensing of liquids manually from bulk storage or packaged goods Indoor
- 10- bulk raw material delivery (Solvents/resins) - Outdoor

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

Sub-scenario(s) 1; 3; 5; 6; 9 : 0.137143

Sub-scenario(s) 2; 7; 8 : 1.371

Sub-scenario(s) 4; 10 : 1.371

Inhalation exposure (mg/m³) :

Sub-scenario(s) 1; 3; 5; 6; 9 : 0.185

Sub-scenario(s) 2; 7; 8 : 4.317

Sub-scenario(s) 4; 10 : 43.167

Combined routes (mg/kg bw/day):

Sub-scenario(s) 1; 3; 5; 6; 9 : 0.163571

Sub-scenario(s) 2; 7; 8 : 1.988

Sub-scenario(s) 4; 10 : 7.538

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day): 0.137143

Inhalation exposure (mg/m³) : 0.616667

Combined routes (mg/kg bw/day): 0.225238

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 20 - Formulation of Powder Coatings and Inks - Solids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of powder coatings and inks - Solids - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES : 20
Industry Association : CEPE
Additional information : Site 1 + 2

CEPE-MP0091, CEPE-MP0034, CEPE-MP0054, CEPE-MP0112, CEPE-MP0012, CEPE-MP0032, CEPE-MP0092, CEPE-MP0070, CEPEMP0111, CEPE-MP0025, CEPE-MP0033, CEPE-MP0053, CEPEMP0042, CEPE-MP0027, CEPE-MP0015, CEPE-MP0071, CEPEMP0024, CEPE-MP0051, CEPE-MP0052, CEPE-MP0013, CEPEMP0023, CEPE-MP0031, CEPE-MP0014, CEPE-MP0041

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
CEPE SPERC Code 2.1c.v1 (CEPE M3)

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 225

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure	: 0.01% Release fraction to air from process. 0.5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.
Technical conditions and measures to control dispersion from source towards the worker	: - Without LEV Outdoor - or with local exhaust ventilation Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: <u>Sub-scenario(s)</u> : 1- Mixing; milling; dispersing; completion - closed continuous process 2- enclosed off-line in workplace 3- enclosed in situ in workplace
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection	: Sub-scenario(s) 1 : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: <u>Sub-scenario(s)</u> : 1- Mixing; milling; dispersing; completion - closed batch process 2- Packaged goods delivery Outdoor 3- Raw material storage - Outdoor 4- Storage of waste prior to removal for off-site management 5- Raw material storage - Indoor
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Sub-scenario(s) 1; 5 : Indoor Sub-scenario(s) 2; 3; 4 : Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) 1; 5 : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 1 : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Sub-scenario(s) 1 : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor with LEV (Local Exhaust Ventilation) or Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) Indoor: Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.024133
Freshwater sediments (mg/kg d.w.) : 0.088271
Marine water (mg/l) : 0.002529
Marine water sediments (mg/kg d.w.) : 0.009251
Agricultural soil (mg/kg dwt): 0.008844
Grassland (mg/kg dwt): 0.008591
Sewage Treatment Plant (mg/l) : 0.197698

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Mixing dispersing grinding and Raw material dispensing of solids
Indoor; Raw material dispensing of solids Outdoor]
Dermal exposure (mg/kg bw/day): [0.034286; 0.342857]
Inhalation exposure (mg/m³) : [0.123333; 0.086333]
Combined routes (mg/kg bw/day): [0.051905; 0.35519]

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- Mixing; milling; dispersing; completion - closed batch process
- 2- enclosed in situ in workplace
- 3- enclosed off-line in workplace

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day):
Sub-scenario(s) 1 : 0.027429
Sub-scenario(s) 2; 3 : 0.137143
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day):
Sub-scenario(s) 1 : 0.045048
Sub-scenario(s) 2; 3 : 0.154762

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- Mixing; milling; dispersing; completion - closed batch process
- 2- Packaged goods delivery Outdoor
- 3- Raw material storage - Outdoor
- 4- Storage of waste prior to removal for off-site management
- 5- Raw material storage - Indoor

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 Sub-scenario(s) 1 : 0.006857
 Sub-scenario(s) 2; 3; 4 : 0.342857
 Sub-scenario(s) 5 : 0.034286
 Inhalation exposure (mg/m³) :
 Sub-scenario(s) 1 : 0.370
 Sub-scenario(s) 2; 3; 4 : 25.9
 Sub-scenario(s) 5 : 3.7
 Combined routes (mg/kg bw/day):
 Sub-scenario(s) 1 : 0.059714
 Sub-scenario(s) 2; 3; 4 : 4.043
 Sub-scenario(s) 5 : 0.562857

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.013714
 Inhalation exposure (mg/m³) : 0.616667
 Combined routes (mg/kg bw/day): 0.10181

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- Raw material dispensing of solids manually from bulk storage or packaged goods Indoor
- 2- Raw material dispensing of liquids manually from bulk storage or packaged goods Indoor
- 3- Opening of manufacturing equipment and pipework containing chemicals for repair
- 4- bulk raw material delivery (Pigments/extenders) - Outdoor
- 5- cleaning manufacturing equipment for maintenance purposes
- 6- Transfer of process wastes to storage containers off-line in workplace

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 Sub-scenario(s) 1; 2; 3; 5; 6 : 0.137143
 Sub-scenario(s) 4 : 1.371
 Inhalation exposure (mg/m³) :
 Sub-scenario(s) 1; 2; 3; 5; 6 : 0.185
 Sub-scenario(s) 4 : 43.167
 Combined routes (mg/kg bw/day):
 Sub-scenario(s) 1; 2; 3; 5; 6 : 0.163571
 Sub-scenario(s) 4 : 7.538

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 filtering or sieving and filling
 respectively [open dedicated lines; enclosed dedicated lines]
 Dermal exposure (mg/kg bw/day): [0.137143; 0.65714]
 Inhalation exposure (mg/m³) : [0.616667; 0.616667]
 Combined routes (mg/kg bw/day): [0.225238; 0.77381]

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 21 - Formulation of Water Borne Coatings and Inks - Solids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of water borne coatings and inks - Solids - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09

Substance supplied to that use in form of: As such, In a mixture

Sector of end use: SU03

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES : 24

Industry Association : CEPE

Additional information : Site 1 + 2

CEPE-MS0092/MW0092.2, CEPEMS0034/MW0034.2, CEPE-MS0012/MW0012.2, CEPE-MS0052/MW0052.2, CEPEMS0035/MW0035.2, CEPE-MS0041/MW0041.2, CEPE-MS0112/MW0112.2, CEPEMS0044/MW0044.2, CEPE-MS0051/MW0051.2, CEPE-MS0042/MW0042.2, CEPEMS0091/MW0091.2, CEPE-MS0072/MW0072.2, CEPE-MS0027/MW0027.2, CEPEMS0033/MW0033.2, CEPE-MS0032/MW0032.2, CEPE-MS0043/MW0043.2, CEPEMS0025/MW0025.2, CEPE-MS0028/MW0028.2, CEPE-MS0111/MW0111.2, CEPEMS0011/MW0011.2, CEPE-MS0054/MW0054.2, CEPE-MS0070/MW0070.2, CEPEMS0026/MW0026.2, CEPE-MS0053/MW0053.2, CEPE-MS0073/MW0073.2, CEPEMS0023/MW0023.2, CEPE-MS0013/MW0013.2, CEPE-MS0022/MW0022.2, CEPEMS0071/MW0071.2, CEPE-MS0024/MW0024.2, CEPE-MS0015/MW0015.2, CEPEMS0014/MW0014.2, CEPE-MS0021/MW0021.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification	: Specific Environmental Release Category: CEPE SPERC Code 2.1b.v1 (CEPE M2)
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 225
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0.01% Release fraction to air from process. 0.5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Raw material dispensing of solids / Raw material dispensing of liquids via pipeline from bulk storage: - Without LEV Outdoor - with local exhaust ventilation Indoor
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.
Technical conditions and measures to control dispersion from source towards the worker	: - Without LEV Outdoor - or with local exhaust ventilation Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure**

Further specification	: <u>Sub-scenario(s)</u> : 1- Mixing; milling; dispersing; completion - closed continuous process 2- enclosed off-line in workplace 3- enclosed in situ in workplace
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Sub-scenario(s):
 1- solvent recovery using condensation or adsorption / desorption processes
 2- Mixing; milling; dispersing; completion - closed batch process
 3- Packaged goods delivery Outdoor
 4- Raw material storage - Outdoor
 5- Storage of waste prior to removal for off-site management
 6- Raw material storage - Indoor

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Sub-scenario(s) 2; 6 : Indoor
 Sub-scenario(s) 1; 3; 4; 5 : Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) 2; 6 : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 1; 2 : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Sub-scenario(s) 1; 2 : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor with LEV (Local Exhaust Ventilation) or Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) Indoor: Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.024133
Freshwater sediments (mg/kg d.w.) : 0.088271
Marine water (mg/l) : 0.002529
Marine water sediments (mg/kg d.w.) : 0.009251
Agricultural soil (mg/kg dwt): 0.008844
Grassland (mg/kg dwt): 0.008591
Sewage Treatment Plant (mg/l) : 0.197698

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Indoor; Outdoor]
Dermal exposure (mg/kg bw/day): [0.034286; 0.342857]
Inhalation exposure (mg/m³) : [0.123333; 0.086333]
Combined routes (mg/kg bw/day): [0.051905; 0.35519]

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.045048

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):
1- solvent recovery using condensation or adsorption / desorption processes
2- Mixing; milling; dispersing; completion - closed batch process
3- Packaged goods delivery Outdoor
4- Raw material storage - Outdoor
5- Storage of waste prior to removal for off-site management
6- Raw material storage - Indoor

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day):
Sub-scenario(s) 1 : 0.068571
Sub-scenario(s) 2 : 0.006857
Sub-scenario(s) 3; 4; 5 : 0.342857
Sub-scenario(s) 6 : 0.034286
Inhalation exposure (mg/m³) :
Sub-scenario(s) 1 : 2.59
Sub-scenario(s) 2 : 0.370
Sub-scenario(s) 3; 4; 5 : 25.9
Sub-scenario(s) 6 : 3.7
Combined routes (mg/kg bw/day):
Sub-scenario(s) 1 : 0.438571
Sub-scenario(s) 2 : 0.059714
Sub-scenario(s) 3; 4; 5 : 4.043
Sub-scenario(s) 6 : 0.562857

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.013714
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.10181

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.203619

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):
1- Raw material dispensing of solids manually from bulk storage or packaged goods Indoor
2- Raw material dispensing of liquids manually from bulk storage or packaged goods Outdoor
3- Opening of manufacturing equipment and pipework containing chemicals for repair
4- bulk raw material delivery (Pigments/extenders) - Outdoor
5- cleaning manufacturing equipment for maintenance purposes
6- Transfer of process wastes to storage containers off-line in workplace
7- Transfer of recovered solvent into bulk storage tanks or IBCs
8- Raw material dispensing of solids manually from bulk storage or packaged goods - Outdoor
9- Raw material dispensing of liquids manually from bulk storage or packaged goods Indoor
10- bulk raw material delivery (Solvents/resins) - Outdoor

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day):
Sub-scenario(s) 1; 3; 5; 6; 9 : 0.137143
Sub-scenario(s) 2; 7; 8 : 1.371
Sub-scenario(s) 4; 10 : 1.371
Inhalation exposure (mg/m³) :
Sub-scenario(s) 1; 3; 5; 6; 9 : 0.185
Sub-scenario(s) 2; 7; 8 : 4.317
Sub-scenario(s) 4; 10 : 43.167
Combined routes (mg/kg bw/day):
Sub-scenario(s) 1; 3; 5; 6; 9 : 0.163571
Sub-scenario(s) 2; 7; 8 : 1.988
Sub-scenario(s) 4; 10 : 7.538

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 22 - Industrial coatings and inks application - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Industrial coatings and inks application - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC10, PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix - ERC05**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES : 22
Industry Association : CEPE
Additional information : Site 1 + 2

CEPE-AI0312, CEPE-AI0105, CEPE-AI0308, CEPEAI0311, CEPE-AI0001, CEPE-AI0106, CEPE-AI0604/AI0610, CEPE-AI1002, CEPE-AI0107, CEPEAI0309, CEPE-AI0307, CEPE-AI0301, CEPE-AI0310, CEPE-AI0303, CEPE-AI0108, CEPE-AI0306, CEPE-AI0305, CEPE-AI0206, CEPE-AI0304, CEPE-AI0203, CEPE-AI0204, CEPE-AI0901, CEPEAI0603/AI0609/AI0615, CEPE-AI0110, CEPE-AI0209, CEPE-AI0205, CEPE-AI0208, CEPEAI0605/AI0611/AI0616, CEPE-AI0302, CEPE-AI0207, CEPE-AI0606/AI0612/AI0617, CEPE-AI0002, CEPE-AI0102, CEPE-AI0103, CEPE-AI0202, CEPE-AI0101, CEPE-AI0505/AI0506, CEPE-AI0003, CEPE-AI0502, CEPE-AI0104, CEPE-AI0004, CEPE-AI0503/AI0504, CEPE-AI0501, CEPE-AI0201, CEPE-AI1001, CEPE-AI0602/AI0608/AI0614, CEPE-AI0601/AI0607/AI0613

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix

Amounts used	: 4 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m ³ /d
Other given operational conditions affecting environmental exposure	: 50% Release fraction to air from process. 50% Release fraction to surface water from process. 1% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure**

Further specification	: <u>Sub-scenario(s)</u> : 1- loading of application equipment: Liquids - closed continuous process 2- loading of application equipment: powder - closed continuous process 3- Preparation of material for application: Liquids - closed continuous process 4- Preparation of material for application: powder - closed continuous process 5- film formation - UV/EB radiation curing 6- film formation - force drying (50-100C) 7- film formation - stoving (>100C)
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Sub-scenario(s) 1; 2 : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Sub-scenario(s) 1; 2; 5; 6; 7 : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Sub-scenario(s):
 1- product delivery/storage product storage - Indoor
 2- product delivery/storage: product storage - Outdoor
 3- product delivery/storage: packaged product delivery - Outdoor
 4- waste management: Storage of waste prior to removal for off-site management - Outdoor
 5- Equipment cleaning: enclosed off-line - Indoor
 6- Equipment cleaning: enclosed in situ - Indoor

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor with LEV (Local Exhaust Ventilation) or Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) 1; 5; 6 : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Respiratory protection : Sub-scenario(s) 5; 6 : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Sub-scenario(s):
 1- Preparation of material for application: Liquids + powder - batch and indoor
 2- Equipment cleaning: open in situ - Outdoor
 3- Preparation of material for application - batch and outdoor
 4- QC laboratory - Indoor
 5- Equipment cleaning: open in situ - Indoor
 6- Equipment cleaning: open off-line - Indoor
 7- Equipment cleaning: open off-line - Outdoor

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Sub-scenario(s) 1; 4; 5; 6 : Indoor with LEV (Local Exhaust Ventilation)

Sub-scenario(s) 2; 3; 7 : Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) 1; 4; 5; 6 : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Sub-scenario(s) 1; 2; 4; 5; 6 : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Further specification	: <u>Sub-scenario(s)</u> : 1- Application: coatings from aerosol dispensers 2- Application: Manual spray application Without LEV - powder 3- Application: Manual spray application with local exhaust ventilation - powder 4- Application: Manual spray application with local exhaust ventilation - Liquids 5- Application: online Manual spray application (open) with local exhaust ventilation 6- Application: online automatic / robotic spray application (enclosed) - powder 7- Application: online automatic / robotic spray application coating or printing (enclosed) 8- Application: Manual spray application Without LEV - Liquids 9- Application: online Manual spray application (open) Without LEV
Frequency and duration of use	: Duration of activity >4 hours
Technical conditions and measures at process level (source) to prevent release	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Sub-scenario(s) 1; 3; 4; 5; 6; 7 : Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification	: <u>Sub-scenario(s)</u> : 1- product delivery/storage: bulk product delivery - Outdoor 2- waste management: Transfer of process wastes to storage containers - off-line in workplace 3- Preparation of material for application: Liquids (coating) transfer of material from one container to another 4- loading of application equipment: powder; batch and indoor 5- Preparation of material for application: powder; transfer of material from one container to another 6- loading of application equipment: powder; transfer of material from one container to another 7- loading of application equipment: Liquids; batch and indoor 8- loading of application equipment: Liquids; transfer of material from one container to another
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Sub-scenario(s) 1 : Outdoor Sub-scenario(s) 2; 3; 4; 5; 6; 7; 8 : Indoor with LEV (Local Exhaust Ventilation)
Technical conditions and measures to control dispersion from source towards the worker	: Sub-scenario(s) 2; 3; 4; 5; 6; 7; 8 : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Sub-scenario(s) 2; 3; 4; 5; 6; 7; 8 : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009824
Grassland (mg/kg dwt): 0.008709
Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.034286
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.051905

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- loading of application equipment: Liquids - closed continuous process
- 2- loading of application equipment: powder - closed continuous process
- 3- Preparation of material for application: Liquids - closed continuous process
- 4- Preparation of material for application: powder - closed continuous process
- 5- film formation - UV/EB radiation curing
- 6- film formation - force drying (50-100C)
- 7- film formation - stoving (>100C)

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 Sub-scenario(s) 1; 2 : 0.027429
 Sub-scenario(s) 3; 4; 5; 6; 7 : 0.137143
 Inhalation exposure (mg/m³) :
 Sub-scenario(s) 1; 2 : 1.2333
 Sub-scenario(s) 3; 4 : 1.233
 Sub-scenario(s) 5; 6; 7 : 0.123333
 Combined routes (mg/kg bw/day):
 Sub-scenario(s) 1; 2 : 0.045048
 Sub-scenario(s) 3; 4 : 0.313333
 Sub-scenario(s) 5; 6; 7 : 0.154762

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- product delivery/storage product storage - Indoor
- 2- product delivery/storage: product storage - Outdoor
- 3- product delivery/storage: packaged product delivery - Outdoor
- 4- waste management: Storage of waste prior to removal for off-site management - Outdoor
- 5- Equipment cleaning: enclosed off-line - Indoor
- 6- Equipment cleaning: enclosed in situ - Indoor

Exposure estimation : Estimated Exposure Concentrations:
 respectively [Indoor; Outdoor]
 Dermal exposure (mg/kg bw/day): [0.034286; 0.342857]
 Inhalation exposure (mg/m³) : [0.370; 25.9]
 Combined routes (mg/kg bw/day): [0.087143; 4.043]

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.685714
 Inhalation exposure (mg/m³) : 0.616667
 Combined routes (mg/kg bw/day): 0.77381

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- Preparation of material for application: Liquids + powder - batch and indoor
- 2- Equipment cleaning: open in situ - Outdoor
- 3- Preparation of material for application - batch and outdoor
- 4- QC laboratory
- 5- Equipment cleaning: open in situ - Indoor
- 6- Equipment cleaning: open off-line - Indoor
- 7- Equipment cleaning: open off-line - Outdoor

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

Sub-scenario(s) 1; 4; 5; 6 : 0.013714

Sub-scenario(s) 2; 3; 7 : 2.743

Inhalation exposure (mg/m³) :

Sub-scenario(s) 1; 4; 5; 6 : 0.616667

Sub-scenario(s) 2 : 4.317

Sub-scenario(s) 3; 7 : 43.167

Combined routes (mg/kg bw/day):

Sub-scenario(s) 1; 4; 5; 6 : 0.10181

Sub-scenario(s) 2 : 3.36

Sub-scenario(s) 3; 7 : 8.91

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- Application: coatings from aerosol dispensers
- 2- Application: Manual spray application Without LEV - powder
- 3- Application: Manual spray application with local exhaust ventilation - powder
- 4- Application: Manual spray application with local exhaust ventilation - Liquids
- 5- Application: online Manual spray application (open) with local exhaust ventilation
- 6- Application: online automatic / robotic spray application (enclosed) - powder
- 7- Application: online automatic / robotic spray application coating or printing (enclosed)
- 8- Application: Manual spray application Without LEV - Liquids
- 9- Application: online Manual spray application (open) Without LEV

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

Sub-scenario(s) 1; 3; 4; 5; 6; 7 : 0.428571

Sub-scenario(s) 2; 8; 9 : 8.573

Inhalation exposure (mg/m³) :

Sub-scenario(s) 1; 3; 4; 5; 6; 7 : 6.167

Sub-scenario(s) 2; 8; 9 : 123.333

Combined routes (mg/kg bw/day):

Sub-scenario(s) 1; 3; 4; 5; 6; 7 : 1.31

Sub-scenario(s) 2; 8; 9 : 26.19

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day): 2.743

Inhalation exposure (mg/m³) : 86.333

Combined routes (mg/kg bw/day): 15.076

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

1- product delivery/storage: bulk product delivery - Outdoor

2- waste management: Transfer of process wastes to storage containers - off-line in workplace

3- Preparation of material for application: Liquids (coating) transfer of material from one container to another

4- loading of application equipment: powder; batch and indoor

5- Preparation of material for application: powder; transfer of material from one container to another

6- loading of application equipment: powder; transfer of material from one container to another

7- loading of application equipment: Liquids; batch and indoor

8- loading of application equipment: Liquids; transfer of material from one container to another

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

Sub-scenario(s) 1 : 1.371

Sub-scenario(s) 2; 3; 4; 5; 6; 7; 8 : 0.137143

Inhalation exposure (mg/m³) :

Sub-scenario(s) 1 : 43.167

Sub-scenario(s) 2; 3; 4; 5; 6; 7; 8 : 0.185

Combined routes (mg/kg bw/day):

Sub-scenario(s) 1 : 7.538

Sub-scenario(s) 2; 3; 4; 5; 6; 7; 8 : 0.163571

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day): 0.274286

Inhalation exposure (mg/m³) : 1.233

Combined routes (mg/kg bw/day): 0.450476

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day): 0.137143

Inhalation exposure (mg/m³) : 1.233

Combined routes (mg/kg bw/day): 0.313333

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 23 - Formulation of Fine Fragrances - Cleaning with Water (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of Fine Fragrances - Cleaning With water (Medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 23
Industry Association	: Colipa
Additional information	: Site 1 + 2
	COLIPA-M7.4, COLIPA-M6.4, COLIPAM8.4, COLIPA-M2.4, COLIPA-M3.4, COLIPA-M5.4.1, COLIPAM5.4.2, COLIPA-M1.4, COLIPA-M4.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
Colipa SPERC Code 2.1.d.v1

Amounts used : 4000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 1.5% Release fraction to surface water from process. 0% Release fraction to soil from process. 24.75% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.064414 Freshwater sediments (mg/kg d.w.) : 0.235609 Marine water (mg/l) : 0.006557 Marine water sediments (mg/kg d.w.) : 0.023984 Agricultural soil (mg/kg dwt): 0.009396 Grassland (mg/kg dwt): 0.008624 Sewage Treatment Plant (mg/l) : 0.600506
Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.123333 Combined routes (mg/kg bw/day): 0.360476
Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133
Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 37 Combined routes (mg/kg bw/day): 5.629
Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 24 - Formulation of Fine Fragrances - Cleaning with Water (small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of Fine Fragrances - Cleaning With water (Small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 24
Industry Association : Colipa
Additional information : Site 1 + 2

COLIPA-M6.5, COLIPA-M1.5, COLIPAM8.5, COLIPA-M5.5.1, COLIPA-M5.5.2, COLIPA-M7.5, COLIPAM4.5, COLIPA-M3.5, COLIPA-M2.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
Colipa SPERC Code 2.1.e.v1

Amounts used : 4000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

145/934

Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 3% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.055% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.00463
 Freshwater sediments (mg/kg d.w.) : 0.016935
 Marine water (mg/l) : 0.000579
 Marine water sediments (mg/kg d.w.) : 0.002117
 Agricultural soil (mg/kg dwt): 0.008575
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.002669

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 25 - Formulation of Medium Viscosity Body Care Products (Small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of Medium Viscosity Body Care Products (Small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 25
Industry Association	: Colipa
Additional information	: Site 1 + 2
	COLIPA-M6.7, COLIPA-M1.7, COLIPAM4.7, COLIPA-M2.7, COLIPA-M8.7, COLIPA-M5.7.1, COLIPA-M7.7, COLIPA-M3.7, COLIPA-M5.7.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
Colipa SPERC Code 2.1.g.v1

Amounts used : 4000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 2% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.555% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :: Freshwater (mg/l) 0.004541 Freshwater sediments (mg/kg d.w.) : 0.016609 Marine water (mg/l) : 0.00054 Marine water sediments (mg/kg d.w.) : 0.002084 Agricultural soil (mg/kg dwt): 0.008573 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.001779
Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.123333 Combined routes (mg/kg bw/day): 0.360476
Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133
Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 37 Combined routes (mg/kg bw/day): 5.629
Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 26 - Formulation of Medium Viscosity Body Care Products (Medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of Medium Viscosity Body Care Products (Medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 26
Industry Association : Colipa
Additional information : Site 1 + 2

COLIPA-M1.6, COLIPA-M7.6, COLIPA-M5.6.1, COLIPA-M5.6.2, COLIPA-M8.6, COLIPA-M4.6, COLIPA-M6.6, COLIPA-M3.6, COLIPA-M2.6

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
Colipa SPERC Code 2.1.f.v1

Amounts used : 4000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 1% Release fraction to surface water from process. 0% Release fraction to soil from process. 24.75% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.0044397 Freshwater sediments (mg/kg d.w.) : 0.016392 Marine water (mg/l) : 0.004555 Marine water sediments (mg/kg d.w.) : 0.016663 Agricultural soil (mg/kg dwt): 0.009121 Grassland (mg/kg dwt): 0.008606 Sewage Treatment Plant (mg/l) : 0.400338
Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.123333 Combined routes (mg/kg bw/day): 0.360476
Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133
Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 37 Combined routes (mg/kg bw/day): 5.629
Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 27 - Formulation of Non-liquid Creams, high viscosity Products (small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of Non-liquid Creams, high viscosity Products (Small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 27
Industry Association	: Colipa
Additional information	: Site 1 + 2
	COLIPA-M5.10.2, COLIPA-M5.10.1, COLIPA-M3.10, COLIPA-M6.10, COLIPA-M7.10, COLIPA-M4.10, COLIPA-M8.10, COLIPA-M2.10, COLIPA-M1.10

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
Colipa SPERC Code 2.1.j.v1

Amounts used : 4000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^ (ES Revision date)

160/934

Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 4% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.055% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

Freshwater (mg/l) 0.004719
 Freshwater sediments (mg/kg d.w.) : 0.01726
 Marine water (mg/l) : 0.000588
 Marine water sediments (mg/kg d.w.) : 0.002149
 Agricultural soil (mg/kg dwt): 0.008576
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.003559

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 28 - Formulation of Non-liquid Creams, high viscosity Products (large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of Non-liquid Creams, high viscosity Products (Large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 28
Industry Association	: Colipa
Additional information	: Site 1 + 2 COLIPA-M6.8, COLIPA-M1.8, COLIPA-M3.8, COLIPA-M8.8, COLIPA-M5.8.2, COLIPA-M5.8.1, COLIPA-M4.8, COLIPA-M7.8, COLIPA-M2.8

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
Colipa SPERC Code 2.1.h.v1

Amounts used : 2300 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

165/934

Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 4% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.055% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.097371 Freshwater sediments (mg/kg d.w.) : 0.356157 Marine water (mg/l) : 0.009853 Marine water sediments (mg/kg d.w.) : 0.036039 Agricultural soil (mg/kg dwt): 0.009849 Grassland (mg/kg dwt): 0.008653 Sewage Treatment Plant (mg/l) : 0.930077
Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.123333 Combined routes (mg/kg bw/day): 0.360476
Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133
Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 37 Combined routes (mg/kg bw/day): 5.629
Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 29 - Formulation of Non-liquid Creams, high viscosity Products (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of Non-liquid Creams, high viscosity Products (Medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 29
Industry Association : Colipa
Additional information : Site 1 + 2

COLIPA-M8.9, COLIPA-M5.9.2, COLIPA-M1.9, COLIPA-M3.9, COLIPA-M7.9, COLIPA-M6.9, COLIPA-M5.9.1, COLIPA-M2.9, COLIPA-M4.9

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
Colipa SPERC Code 2.1.i.v1

Amounts used : 4000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

170/934

Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 2% Release fraction to surface water from process. 0% Release fraction to soil from process. 24.75% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.08443
 Freshwater sediments (mg/kg d.w.) : 0.308825
 Marine water (mg/l) : 0.008559
 Marine water sediments (mg/kg d.w.) : 0.031306
 Agricultural soil (mg/kg dwt): 0.009671
 Grassland (mg/kg dwt): 0.008642
 Sewage Treatment Plant (mg/l) : 0.800675

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 30 - Formulation of body care soap (large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of body care soap (Large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 30

Industry Association : Colipa

Additional information : Site 1 + 2

COLIPA-M3.14, COLIPA-M8.14, COLIPA-M5.14.2, COLIPA-M2.14, COLIPA-M5.14.1, COLIPA-M6.14, COLIPA-M7.14, COLIPA-M1.14, COLIPA-M4.14

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Further specification : Specific Environmental Release Category:
Colipa SPERC Code 2.1.a.v1

Amounts used : 4000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

175/934

Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.05% Release fraction to surface water from process. 0% Release fraction to soil from process. 91.85% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.011791
Freshwater sediments (mg/kg d.w.) : 0.04313
Marine water (mg/l) : 0.001295
Marine water sediments (mg/kg d.w.) : 0.004736
Agricultural soil (mg/kg dwt): 0.008673
Grassland (mg/kg dwt): 0.008577
Sewage Treatment Plant (mg/l) : 0.074285

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 31 - Formulation of body care soap (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of body care soap (Large scale) - Medium scale - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 31
Industry Association	: Colipa
Additional information	: Site 1 + 2 COLIPA-M1.15, COLIPA-M5.15.2, COLIPA-M5.15.1, COLIPAM2.15, COLIPA-M4.15, COLIPA-M3.15, COLIPA-M8.15, COLIPAM7.15, COLIPA-M6.15

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
Colipa SPERC Code 2.3.b.v1

Amounts used : 4000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.1% Release fraction to surface water from process. 0% Release fraction to soil from process. 24.75% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.008366
 Freshwater sediments (mg/kg d.w.) : 0.030602
 Marine water (mg/l) : 0.000952
 Marine water sediments (mg/kg d.w.) : 0.003484
 Agricultural soil (mg/kg dwt): 0.008626
 Grassland (mg/kg dwt): 0.008574
 Sewage Treatment Plant (mg/l) : 0.040034

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 32 - Formulation of body care soap (small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of body care soap (Small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 32
Industry Association : Colipa
Additional information : Site 1 + 2

COLIPA-M3.16, COLIPA-M4.16, COLIPA-M1.16, COLIPA-M6.16, COLIPA-M5.16.1, COLIPA-M5.16.2, COLIPA-M8.16, COLIPA-M7.16, COLIPA-M2.16

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
Colipa SPERC Code 2.3.c.v1

Amounts used : 4000 Tonnes/year

Frequency and duration of use : Release times per year: 20

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.2% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.005% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004381
Freshwater sediments (mg/kg d.w.) : 0.016024
Marine water (mg/l) : 0.000554
Marine water sediments (mg/kg d.w.) : 0.002026
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000178

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 33 - Formulation of cosmetic products involving cleaning with Organic Solvents (large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of cosmetic products involving cleaning with Organic Solvents (Large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 33
Industry Association	: Colipa
Processes and activities covered by the exposure scenario	: Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products
Additional information	: Site 1 + 2 COLIPA-M5.11.2, COLIPA-M5.11.1, COLIPAM7.11, COLIPA-M8.11, COLIPA-M6.11, COLIPA-M4.11, COLIPA-M2.11, COLIPA-M3.11, COLIPAM1.11

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification	: Specific Environmental Release Category: Colipa SPERC Code 2.2.a.v1
Amounts used	: 4000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 91.85% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent**Further specification** : Same for all PROC.**Frequency and duration of use** : Duration of activity >4 hours**Other given operational conditions affecting workers exposure** : Indoor**Conditions and measures related to personal protection and hygiene****Section 3 - Exposure estimation and reference to its source****Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008583
Grassland (mg/kg dwt): 0.008572
Sewage Treatment Plant (mg/l) : 0**Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133**Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 33 - Formulation of cosmetic products involving cleaning with Organic Solvents (large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 34 - Formulation of cosmetic products involving cleaning with Organic Solvents (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of cosmetic products involving cleaning with Organic Solvents (Medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 34
Industry Association	: Colipa
Processes and activities covered by the exposure scenario	: Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products
Additional information	: Site 1 + 2 COLIPA-M8.12, COLIPA-M2.12, COLIPA-M5.12.1, COLIPA-M6.12, COLIPA-M3.12, COLIPA-M4.12, COLIPA-M5.12.2, COLIPA-M7.12, COLIPA-M1.12

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification	: Specific Environmental Release Category: Colipa SPERC Code 2.2.b.v1
Amounts used	: 4000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 24.75% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent**Further specification** : Same for all PROC.**Frequency and duration of use** : Duration of activity >4 hours**Other given operational conditions affecting workers exposure** : Indoor**Conditions and measures related to personal protection and hygiene****Section 3 - Exposure estimation and reference to its source****Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008583
Grassland (mg/kg dwt): 0.008572
Sewage Treatment Plant (mg/l) : 0**Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133**Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

***ES 34 - Formulation of cosmetic products involving
cleaning with Organic Solvents (medium scale) -
Industrial - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts***

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 35 - Formulation of cosmetic products involving cleaning with Organic Solvents (small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of cosmetic products involving cleaning with Organic Solvents (Medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 35
Industry Association	: Colipa
Processes and activities covered by the exposure scenario	: Varnish / Removers, Decorative Cosmetics, Spray, Lacquer, Fine Fragrance, Solar oil, solid products
Additional information	: Site 1 + 2 COLIPA-M2.13, COLIPA-M3.13, COLIPA-M5.13.1, COLIPA-M7.13, COLIPA-M6.13, COLIPA-M4.13, COLIPA-M1.13, COLIPA-M8.13, COLIPA-M5.13.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification	: Specific Environmental Release Category: Colipa SPERC Code 2.2.c.v1
Amounts used	: 4000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.055% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent**Further specification** : Same for all PROC.**Frequency and duration of use** : Duration of activity >4 hours**Other given operational conditions affecting workers exposure** : Indoor**Conditions and measures related to personal protection and hygiene****Section 3 - Exposure estimation and reference to its source****Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008583
Grassland (mg/kg dwt): 0.008572
Sewage Treatment Plant (mg/l) : 0**Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133**Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

***ES 35 - Formulation of cosmetic products involving
cleaning with Organic Solvents (small scale) - Industrial
- Sulfuric acid, mono-C12-14-alkyl esters, sodium salts***

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 36 - Formulation of low viscosity liquids (large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of low viscosity liquids (Large scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 36
Industry Association	: Colipa
Processes and activities covered by the exposure scenario	: Shampoo, hair conditioner, shower gel, foam bath
Additional information	: Site 1 + 2 COLIPA-M5.1.1, COLIPA-M7.1, COLIPA-M8.1, COLIPA-M4.1, COLIPA-M3.1, COLIPA-M6.1, COLIPA-M2.1, COLIPA-M5.1.2, COLIPA-M1.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification	: Specific Environmental Release Category: Colipa SPERC Code 2.1.a.v1
Amounts used	: 4000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.1% Release fraction to surface water from process. 0% Release fraction to soil from process. 91.85% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent**Further specification** : Same for all PROC.**Frequency and duration of use** : Duration of activity >4 hours**Other given operational conditions affecting workers exposure** : Indoor**Conditions and measures related to personal protection and hygiene****Section 3 - Exposure estimation and reference to its source****Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.01922
Freshwater sediments (mg/kg d.w.) : 0.070302
Marine water (mg/l) : 0.002038
Marine water sediments (mg/kg d.w.) : 0.007454
Agricultural soil (mg/kg dwt): 0.008775
Grassland (mg/kg dwt): 0.008584
Sewage Treatment Plant (mg/l) : 0.14857**Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133**Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 36 - Formulation of low viscosity liquids (large scale)
- Industrial - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 37 - Formulation of low viscosity liquids (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation of low viscosity liquids (Medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 37

Industry Association : Colipa

Processes and activities covered by the exposure scenario : Shampoo, hair conditioner, shower gel, foam bath

Additional information : Site 1 + 2

COLIPA-M5.2.1, COLIPA-M5.2.2, COLIPA-M2.2, COLIPA-M3.2, COLIPAM1.2, COLIPA-M6.2, COLIPA-M8.2, COLIPA-M7.2, COLIPA-M4.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification	: Specific Environmental Release Category: Colipa SPERC Code 2.1.b.v1
Amounts used	: 4000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.2% Release fraction to surface water from process. 0% Release fraction to soil from process. 24.75% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its sourceWebsite: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations***

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.01237
Freshwater sediments (mg/kg d.w.) : 0.045245
Marine water (mg/l) : 0.001353
Marine water sediments (mg/kg d.w.) : 0.004948
Agricultural soil (mg/kg dwt): 0.008681
Grassland (mg/kg dwt): 0.008578
Sewage Treatment Plant (mg/l) : 0.080068**Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure**

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure**

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133**Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)**

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 37 - Formulation of low viscosity liquids (medium scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 38 - Formulation of low viscosity liquids (small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of low viscosity liquids (Small scale) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC39

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 4338
Industry Association	: Colipa
Processes and activities covered by the exposure scenario	: Shampoo, hair conditioner, shower gel, foam bath
Additional information	: Site 1 + 2 COLIPA-M6.3, COLIPA-M4.3, COLIPA-M5.3.2, COLIPA-M8.3, COLIPA-M7.3, COLIPA-M3.3, COLIPA-M2.3, COLIPA-M5.3.1, COLIPA-M1.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification	: Specific Environmental Release Category: Colipa SPERC Code 2.1.c.v1
Amounts used	: 4000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.4% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.055% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its sourceWebsite: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations***

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004399
Freshwater sediments (mg/kg d.w.) : 0.016089
Marine water (mg/l) : 0.000556
Marine water sediments (mg/kg d.w.) : 0.002032
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000356**Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure**

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure**

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133**Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)**

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

**ES 38 - Formulation of low viscosity liquids (small scale)
- Industrial - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts**

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 39 - Coating - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Coating. - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06d
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers - ERC06d**

Health Contributing scenarios : **PROC13: Treatment of articles by dipping and pouring - PROC13**

Number of the ES	: 39
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-T16.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 35% Release fraction to air from process.
0.005% Release fraction to surface water from process.
0.025% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004808
 Freshwater sediments (mg/kg d.w.) : 0.0017586
 Marine water (mg/l) : 0.000597
 Marine water sediments (mg/kg d.w.) : 0.002182
 Agricultural soil (mg/kg dwt): 0.013952
 Grassland (mg/kg dwt): 0.01894
 Sewage Treatment Plant (mg/l) : 0.004448

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 4.505

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 40 - Distribution Forwarding (closed System) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Distribution Forwarding (closed System) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01

Number of the ES	: 40
Additional information	: Site 1 + 2
	FECC 1.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Amounts used	: 500 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 2.5% Release fraction to air from process. 2% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: **PROC01: Use in closed process, no likelihood of exposure**

Frequency and duration of use	: Duration of activity: >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source**Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009985
Grassland (mg/kg dwt): 0.00902
Sewage Treatment Plant (mg/l) : 0.889639**Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476**Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES****Environment** : Not available.**Health** : Not available.**Additional good practice advice beyond the REACH CSA****Environment** : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 41 - Distribution Q Controlling - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Distribution Q Controlling - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08b
Environmental contributing scenarios : **ERC08b: Wide dispersive indoor use of reactive substances in open systems - ERC08b**
Health Contributing scenarios : **PROC15: Use as laboratory reagent - PROC15**

Number of the ES : 41
Additional information : Site 1 + 2
FECC 1.6

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08b: Wide dispersive indoor use of reactive substances in open systems**

Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 0.1% Release fraction to air from process.
2% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: **PROC15: Use as laboratory reagent**

Frequency and duration of use : Duration of activity: >4 hours
Area of use : Indoor
Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08b: Wide dispersive indoor use of reactive substances in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004373
 Freshwater sediments (mg/kg d.w.) : 0.015994
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002023
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l): 0.000097

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 42 - Distribution Repacking - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Distribution Repacking - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)** - PROC09

Number of the ES : 42
Additional information : Site 1 + 2
FECC 1.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Amounts used : 500 Tonnes/year
Frequency and duration of use : Release times per year: 100
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 2.5% Release fraction to air from process.
2% Release fraction to surface water from process.
0.01% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: **PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)**

Frequency and duration of use : Duration of activity: >4 hours
Area of use : Indoor
Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.093327
- Freshwater sediments (mg/kg d.w.) : 0.341366
- Marine water (mg/l) : 0.009448
- Marine water sediments (mg/kg d.w.) : 0.03456
- Agricultural soil (mg/kg dwt): 0.009985
- Grassland (mg/kg dwt): 0.00902
- Sewage Treatment Plant (mg/l): 0.889639

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): 6.857
- Inhalation exposure (mg/m³) : 61.667
- Combined routes (mg/kg bw/day): 15.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 43 - Distribution Sampling - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Distribution Sampling - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure** - PROC02

Number of the ES	: 43
Additional information	: Site 1 + 2
	FECC 1.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Amounts used	: 500 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 2.5% Release fraction to air from process. 2% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: **PROC02: Use in closed, continuous process with occasional controlled exposure**

Frequency and duration of use	: Duration of activity: >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.093327
 Freshwater sediments (mg/kg d.w.) : 0.341366
 Marine water (mg/l) : 0.009448
 Marine water sediments (mg/kg d.w.) : 0.03456
 Agricultural soil (mg/kg dwt): 0.009985
 Grassland (mg/kg dwt): 0.00902
 Sewage Treatment Plant (mg/l): 0.889639

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 44 - Distribution Storing - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Distribution Storing - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01

Number of the ES	: 44
Additional information	: Site 1 + 2
	FECC 1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Amounts used	: 500 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 2.5% Release fraction to air from process. 2% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: **PROC01: Use in closed process, no likelihood of exposure**

Frequency and duration of use	: Duration of activity: >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.093327
 Freshwater sediments (mg/kg d.w.) : 0.341366
 Marine water (mg/l) : 0.009448
 Marine water sediments (mg/kg d.w.) : 0.03456
 Agricultural soil (mg/kg dwt): 0.009985
 Grassland (mg/kg dwt): 0.00902
 Sewage Treatment Plant (mg/l): 0.889639

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 45 - Distribution Uploading / unloading - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Distribution Uploading / unloading - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities** - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b

Number of the ES	: 45
Additional information	: Site 1 + 2
	FECC 1.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Amounts used	: 500 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 2.5% Release fraction to air from process. 2% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.093327
 Freshwater sediments (mg/kg d.w.) : 0.341366
 Marine water (mg/l) : 0.009448
 Marine water sediments (mg/kg d.w.) : 0.03456
 Agricultural soil (mg/kg dwt): 0.009985
 Grassland (mg/kg dwt): 0.00902
 Sewage Treatment Plant (mg/l): 0.889639

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 123.333
 Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 15.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Date of issue/Date of revision : [^](ES Revision date)

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SILIPON RN6068

**ES 45 - Distribution Uploading / unloading - Industrial -
Sulfuric acid, mono-C12-14-alkyl esters, sodium salts**

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 46 - Manufacture of aqueous polymer dispersions and dispersion powders - Formulation of Preparations - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Manufacture of aqueous polymer dispersions and dispersion powders - Formulation of preparations - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 46
Industry Association : EPDLA
Additional information : Site 1 + 2

EPDLA-P2.1, EPDLA-P3.1, EPDLA-MM1.1.1, EPDLA-WM6.5.1, EPDLA-C2.1, EPDLA-M1.1, EPDLA-RMH1.1, EPDLA-RMS3.1, EPDLA-WM6.1.1, EPDLA-F3.1.1, EPDLA-P4.1, EPDLA-WM6.4.1, EPDLA-WM2.2.1, EPDLA-St1.1, EPDLA-C4.1, EPDLA-C3.1, EPDLARMS1.1, EPDLA-F3.4.1, EPDLA-WM5.1, EPDLA-WM2.1.1, EPDLAWM1.3.1, EPDLA-M3.1, EPDLA-C5.1, EPDLA-RMH2.1, EPDLA-St2.1, EPDLA-RMS2.2.1, EPDLA-WM6.2.1, EPDLA-WM1.1.1, EPDLA-F1.1, EPDLA-F2.1, EPDLA-M2.1, EPDLA-S1.1, EPDLA-F3.2.1, EPDLAF3.3.1, EPDLA-CI2.1, EPDLA-MM1.2.1, EPDLA-CI1.1, EPDLAWM1.2.1, EPDLA-C1.1, EPDLA-RMS2.1.1, EPDLA-L1.1, EPDLA-P1.1, EPDLA-WM6.3.1, EPDLA-Sp.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Amounts used	: 20 Tonnes/year
Frequency and duration of use	: Release times per year: 10
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 2.5% Release fraction to water from process: 2% Release fraction to soil from process: 0.01% Fraction used at main source: 100% Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- Filtering and filling: filtration, centrifugation, sieving and filling - enclosed dedicated lines 2- waste management: storage of waste prior to removal for off-site and/or on-site treatment 3- waste management: transfer of wastes to tanks and storage containers: off-line in workplace 4- Polymerisation.: Mixing, heating, cooling - closed process (Sampling) 5- waste management: waste water treatment on site 6- Receipt and storage of raw materials: bulk raw material and Packaged goods delivery - Indoor and Outdoor 7- Storage and delivery of finished products: in bulk and packaged goods, Indoor and Outdoor 8- waste management: Incineration On-site 9- Blending/emulsifying: closed process (with Sampling) 10- Raw material assembly and charging: Raw material dispensing of liquids and Solids via pipeline from bulk storage or packaged goods - Indoor and Outdoor
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- waste management: waste water treatment on site 2- Manufacturing Equipment cleaning: enclosed in situ in workplace or off-line in workplace 3- Polymerisation.: Mixing, heating, cooling - closed continuous process (Sampling) 4- Blending/emulsifying: closed continuous process (with Sampling) 5- Mixing, Blending, completion: closed continuous process (Sampling) 6- Stripping: closed continuous process
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Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : - Sub-scenario(s):

- 1- Stripping: Distillation - closed batch process
- 2- waste management: storage of waste prior to removal for off-site and/or on-site treatment
- 3- Filtering and filling: filtration, centrifugation, sieving and filling - enclosed dedicated lines
- 4- waste management: waste water treatment on site
- 5- Blending/emulsifying: closed batch process (with Sampling)
- 6- Polymerisation.: Mixing, heating, cooling - closed batch process (Sampling)
- 7- Mixing, Blending, completion: closed batch process (Sampling)

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : - Sub-scenario(s):

- 1- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes
- 2- Blending/emulsifying: batch or other processes (with Sampling)
- 3- Manufacturing Equipment cleaning: open in situ or open off-line in workplace (includes replacing filters during filtration)
- 4- Receipt and storage of raw materials of raw material: bulk raw material and Packaged goods delivery - Indoor and Outdoor
- 5- waste management: waste water treatment on site
- 6- Mixing, Blending, completion: Batch process (Sampling)
- 7- Polymerisation.: Mixing, heating, cooling - batch or other processes (Sampling)

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : - Sub-scenario(s):

- 1- Raw material assembly and charging: Raw material dispensing of liquids or Solids manually from bulk storage or packaged goods, also blending and dissolving of raw materials - Indoor open batch process (additions)
- 2- Blending/emulsifying: open batch process (with Sampling)
- 3- waste management: waste water treatment on site

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Further specification : - Spray-Drying: Spray-Drying

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Respiratory protection : Wear respiratory protection: 90% effectiveness

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : - Sub-scenario(s):

1- waste management: transfer of wastes to tanks and storage containers: off-line in workplace

2- Raw material assembly and charging: Raw material dispensing of liquids and Solids manually from bulk storage or packaged goods - Indoor and Outdoor

3- Manufacturing Equipment maintenance: Opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes

4- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : - Sub-scenario(s):

1- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

2- Manufacturing Equipment maintenance: Opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes

3- Raw material assembly and charging: Raw material dispensing of liquids or Solids manually from bulk storage or packaged goods - Indoor and Outdoor

4- waste management: transfer of wastes to tanks and storage containers: off-line in workplace

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : - Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : - Laboratory Use: QC & RD Laboratory Use

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations***

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.039949
Freshwater sediments (mg/kg d.w.) : 0.146122
Marine water (mg/l) : 0.004111
Marine water sediments (mg/kg d.w.) : 0.015036
Agricultural soil (mg/kg dwt): 0.009068
Grassland (mg/kg dwt): 0.008617
Sewage Treatment Plant (mg/l) : 0.355856

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 60.476

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

SILIPON RN6068

**ES 46 - Manufacture of aqueous polymer dispersions
and dispersion powders - Formulation of Preparations -
Industrial - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts**

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 47 - Manufacture of aqueous polymer dispersions and dispersion powders - Use of Intermediates - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Manufacture of aqueous polymer dispersions and dispersion powders - Use of Intermediates - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06a

Environmental contributing scenarios : **ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)** - ERC06a

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 47
Industry Association : EPDLA
Additional information : Site 1 + 2

EPDLAWM6.2.3, EPDLA-CI2.3, EPDLA-C5.3, EPDLA-F3.2.3, EPDLARMS2.1.3, EPDLA-CI1.3, EPDLA-M2.3, EPDLA-M3.3, EPDLAWM1.1.3, EPDLA-WM6.3.3, EPDLA-WM5.3, EPDLA-P2.3, EPDLARMH2.3, EPDLA-WM1.2.3, EPDLA-WM6.5.3, EPDLA-C2.3, EPDLAF3.3.3, EPDLA-Sp.3, EPDLA-P4.3, EPDLA-RMS1.3, EPDLA-WM1.3.3, EPDLA-RMH1.3, EPDLA-RMS2.2.3, EPDLA-St1.3, EPDLA-F3.1.3, EPDLA-F1.3, EPDLA-WM2.1.3, EPDLA-MM1.1.3, EPDLA-RMS3.3, EPDLA-C3.3, EPDLA-MM1.2.3, EPDLA-WM2.2.3, EPDLA-WM6.1.3, EPDLA-F3.4.3, EPDLA-C1.3, EPDLA-St2.3, EPDLA-F2.3, EPDLAM1.3, EPDLA-S1.3, EPDLA-C4.3, EPDLA-P1.3, EPDLA-WM6.4.3, EPDLA-P3.3, EPDLA-L1.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)

Amounts used	: 1 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 5% Release fraction to water from process: 2% Release fraction to soil from process: 0.1% Fraction used at main source: 100% Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- Filtering and filling: filtration, centrifugation, sieving and filling - enclosed dedicated lines 2- waste management: storage of waste prior to removal for off-site and/or on-site treatment 3- waste management: transfer of wastes to tanks and storage containers: off-line in workplace 4- Polymerisation.: Mixing, heating, cooling - closed process (Sampling) 5- waste management: waste water treatment on site 6- Receipt and storage of raw materials: bulk raw material and Packaged goods delivery - Indoor and Outdoor 7- Storage and delivery of finished products: in bulk and packaged goods, Indoor and Outdoor 8- waste management: Incineration On-site 9- Blending/emulsifying: closed process (with Sampling) 10- Raw material assembly and charging: Raw material dispensing of liquids and Solids via pipeline from bulk storage or packaged goods - Indoor and Outdoor
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- waste management: waste water treatment on site 2- Manufacturing Equipment cleaning: enclosed in situ in workplace or off-line in workplace 3- Polymerisation.: Mixing, heating, cooling - closed continuous process (Sampling) 4- Blending/emulsifying: closed continuous process (with Sampling) 5- Mixing, Blending, completion: closed continuous process (Sampling) 6- Stripping: closed continuous process
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Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : - Sub-scenario(s):

- 1- Stripping: Destillation - closed batch process
- 2- waste management: storage of waste prior to removal for off-site and/or on-site treatment
- 3- Filtering and filling: filtration, centrifugation, sieving and filling - enclosed dedicated lines
- 4- waste management: waste water treatment on site
- 5- Blending/emulsifying: closed batch process (with Sampling)
- 6- Polymerisation.: Mixing, heating, cooling - closed batch process (Sampling)
- 7- Mixing, Blending, completion: closed batch process (Sampling)

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : - Sub-scenario(s):

- 1- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes
- 2- Blending/emulsifying: batch or other processes (with Sampling)
- 3- Manufacturing Equipment cleaning: open in situ or open off-line in workplace (includes replacing filters during filtration)
- 4- Receipt and storage of raw materials of raw material: bulk raw material and Packaged goods delivery - Indoor and Outdoor
- 5- waste management: waste water treatment on site
- 6- Mixing, Blending, completion: Batch process (Sampling)
- 7- Polymerisation.: Mixing, heating, cooling - batch or other processes (Sampling)

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : - Sub-scenario(s):

- 1- Raw material assembly and charging: Raw material dispensing of liquids or Solids manually from bulk storage or packaged goods, also blending and dissolving of raw materials - Indoor open batch process (additions)
- 2- Blending/emulsifying: open batch process (with Sampling)
- 3- waste management: waste water treatment on site

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Further specification : - Spray-Drying: Spray-Drying

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : - Sub-scenario(s):

1- waste management: transfer of wastes to tanks and storage containers: off-line in workplace

2- Raw material assembly and charging: Raw material dispensing of liquids and Solids manually from bulk storage or packaged goods - Indoor and Outdoor

3- Manufacturing Equipment maintenance: Opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes

4- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : - Sub-scenario(s):

1- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

2- Manufacturing Equipment maintenance: Opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes

3- Raw material assembly and charging: Raw material dispensing of liquids or Solids manually from bulk storage or packaged goods - Indoor and Outdoor

4- waste management: transfer of wastes to tanks and storage containers: off-line in workplace

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : - Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : - Laboratory Use: QC & RD Laboratory Use

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)**

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.005253
Freshwater sediments (mg/kg d.w.) : 0.019213
Marine water (mg/l) : 0.000641
Marine water sediments (mg/kg d.w.) : 0.002345
Agricultural soil (mg/kg dwt): 0.008584
Grassland (mg/kg dwt): 0.008573
Sewage Treatment Plant (mg/l) : 0.008896

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 60.476

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 48 - Manufacture of aqueous polymer dispersions and dispersion powders - Use of Monomers - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Manufacture of aqueous polymer dispersions and dispersion powders - Use of Monomers - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: In a mixture, As such
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06c

Environmental contributing scenarios : **ERC06c: Industrial use of monomers for manufacture of thermoplastics - ERC06c**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 48
Industry Association : EPDLA
Additional information : Site 1 + 2

EPDLA-C11.4, EPDLA-RMH1.4, EPDLAWM2.2.4, EPDLA-C4.4, EPDLA-F3.2.4, EPDLA-RMS3.4, EPDLA-F3.4.4, EPDLA-WM6.2.4, EPDLARMS2.1.4, EPDLA-P4.4, EPDLA-C5.4, EPDLA-P3.4, EPDLA-WM6.4.4, EPDLA-RMS1.4, EPDLAL1.4, EPDLA-F2.4, EPDLA-C3.4, EPDLA-Sp.4, EPDLA-S1.4, EPDLA-WM6.5.4, EPDLA-WM2.1.4, EPDLA-WM1.1.4, EPDLA-P1.4, EPDLA-WM1.3.4, EPDLA-WM6.1.4, EPDLA-MM1.1.4, EPDLA-CI2.4, EPDLA-St1.4, EPDLA-M2.4, EPDLA-RMS2.2.4, EPDLA-C2.4, EPDLA-WM5.4, EPDLA-M3.4, EPDLAWM1.2.4, EPDLA-C1.4, EPDLA-WM6.3.4, EPDLA-MM1.2.4, EPDLA-RMH2.4, EPDLA-F3.1.4, EPDLA-M1.4, EPDLA-F3.3.4, EPDLA-St2.4, EPDLA-P2.4, EPDLA-F1.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06c: Industrial use of monomers for manufacture of thermoplastics

Amounts used	: 10 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 5% Release fraction to water from process: 5% Release fraction to soil from process: 0% Fraction used at main source: 100% Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- Filtering and filling: filtration, centrifugation, sieving and filling - enclosed dedicated lines 2- waste management: storage of waste prior to removal for off-site and/or on-site treatment 3- waste management: transfer of wastes to tanks and storage containers: off-line in workplace 4- Polymerisation.: Mixing, heating, cooling - closed process (Sampling) 5- waste management: waste water treatment on site 6- Receipt and storage of raw materials: bulk raw material and Packaged goods delivery - Indoor and Outdoor 7- Storage and delivery of finished products: in bulk and packaged goods, Indoor and Outdoor 8- waste management: Incineration On-site 9- Blending/emulsifying: closed process (with Sampling) 10- Raw material assembly and charging: Raw material dispensing of liquids and Solids via pipeline from bulk storage or packaged goods - Indoor and Outdoor
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- waste management: waste water treatment on site 2- Manufacturing Equipment cleaning: enclosed in situ in workplace or off-line in workplace 3- Polymerisation.: Mixing, heating, cooling - closed continuous process (Sampling) 4- Blending/emulsifying: closed continuous process (with Sampling) 5- Mixing, Blending, completion: closed continuous process (Sampling) 6- Stripping: closed continuous process
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Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : - Sub-scenario(s):

- 1- Stripping: Destillation - closed batch process
- 2- waste management: storage of waste prior to removal for off-site and/or on-site treatment
- 3- Filtering and filling: filtration, centrifugation, sieving and filling - enclosed dedicated lines
- 4- waste management: waste water treatment on site
- 5- Blending/emulsifying: closed batch process (with Sampling)
- 6- Polymerisation.: Mixing, heating, cooling - closed batch process (Sampling)
- 7- Mixing, Blending, completion: closed batch process (Sampling)

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : - Sub-scenario(s):

- 1- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes
- 2- Blending/emulsifying: batch or other processes (with Sampling)
- 3- Manufacturing Equipment cleaning: open in situ or open off-line in workplace (includes replacing filters during filtration)
- 4- Receipt and storage of raw materials of raw material: bulk raw material and Packaged goods delivery - Indoor and Outdoor
- 5- waste management: waste water treatment on site
- 6- Mixing, Blending, completion: Batch process (Sampling)
- 7- Polymerisation.: Mixing, heating, cooling - batch or other processes (Sampling)

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : - Sub-scenario(s):

- 1- Raw material assembly and charging: Raw material dispensing of liquids or Solids manually from bulk storage or packaged goods, also blending and dissolving of raw materials - Indoor open batch process (additions)
- 2- Blending/emulsifying: open batch process (with Sampling)
- 3- waste management: waste water treatment on site

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Further specification : - Spray-Drying: Spray-Drying

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : - Sub-scenario(s):

- 1- waste management: transfer of wastes to tanks and storage containers: off-line in workplace
- 2- Raw material assembly and charging: Raw material dispensing of liquids and Solids manually from bulk storage or packaged goods - Indoor and Outdoor
- 3- Manufacturing Equipment maintenance: Opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
- 4- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : - Sub-scenario(s):

- 1- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes
- 2- Manufacturing Equipment maintenance: Opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
- 3- Raw material assembly and charging: Raw material dispensing of liquids or Solids manually from bulk storage or packaged goods - Indoor and Outdoor
- 4- waste management: transfer of wastes to tanks and storage containers: off-line in workplace

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : - Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : - Laboratory Use: QC & RD Laboratory Use

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: ERC06c: Industrial use of monomers for manufacture of thermoplastics**

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.026604
Freshwater sediments (mg/kg d.w.) : 0.09731
Marine water (mg/l) : 0.002776
Marine water sediments (mg/kg d.w.) : 0.010154
Agricultural soil (mg/kg dwt): 0.008884
Grassland (mg/kg dwt): 0.008605
Sewage Treatment Plant (mg/l) : 0.22241

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 60.476

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

SILIPON RN6068

ES 48 - Manufacture of aqueous polymer dispersions and dispersion powders - Use of Monomers - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 49 - Manufacture of aqueous polymer dispersions and dispersion powders - Use of Process Regulators for Polymerisation - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Manufacture of aqueous polymer dispersions and dispersion powders - Use of Process Regulators for Polymerisation - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06d

Environmental contributing scenarios : **ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers - ERC06d**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 49
Industry Association : EPDLA
Additional information : Site 1 + 2

EPDLA-M2.5, EPDLA-St1.5, EPDLA-WM6.3.5, EPDLA-RMH2.5, EPDLA-P2.5, EPDLA-RMS2.1.5, EPDLA-WM2.1.5, EPDLA-C12.5, EPDLA-P4.5, EPDLA-F3.3.5, EPDLA-RMH1.5, EPDLA-C3.5, EPDLA-WM6.5.5, EPDLA-L1.5, EPDLA-F1.5, EPDLA-S1.5, EPDLA-MM1.1.5, EPDLA-WM1.3.5, EPDLA-WM2.2.5, EPDLA-WM5.5, EPDLA-M1.5, EPDLA-F3.4.5, EPDLA-MM1.2.5, EPDLA-RMS2.2.5, EPDLA-WM1.1.5, EPDLA-St2.5, EPDLA-Sp.5, EPDLA-WM6.4.5, EPDLA-M3.5, EPDLA-WM6.2.5, EPDLA-RMS3.5, EPDLA-F3.1.5, EPDLA-WM6.1.5, EPDLA-C2.5, EPDLA-P3.5, EPDLA-C4.5, EPDLA-F2.5, EPDLAC1.5, EPDLA-F3.2.5, EPDLA-WM1.2.5, EPDLA-C5.5, EPDLA-RMS1.5, EPDLA-C1.5, EPDLA-P1.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

Amounts used	: 50 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 35% Release fraction to water from process: 0.005% Release fraction to soil from process: 0.025% Fraction used at main source: 100% Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- Filtering and filling: filtration, centrifugation, sieving and filling - enclosed dedicated lines 2- waste management: storage of waste prior to removal for off-site and/or on-site treatment 3- waste management: transfer of wastes to tanks and storage containers: off-line in workplace 4- Polymerisation.: Mixing, heating, cooling - closed process (Sampling) 5- waste management: waste water treatment on site 6- Receipt and storage of raw materials: bulk raw material and Packaged goods delivery - Indoor and Outdoor 7- Storage and delivery of finished products: in bulk and packaged goods, Indoor and Outdoor 8- waste management: Incineration On-site 9- Blending/emulsifying: closed process (with Sampling) 10- Raw material assembly and charging: Raw material dispensing of liquids and Solids via pipeline from bulk storage or packaged goods - Indoor and Outdoor
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- waste management: waste water treatment on site 2- Manufacturing Equipment cleaning: enclosed in situ in workplace or off-line in workplace 3- Polymerisation.: Mixing, heating, cooling - closed continuous process (Sampling) 4- Blending/emulsifying: closed continuous process (with Sampling) 5- Mixing, Blending, completion: closed continuous process (Sampling) 6- Stripping: closed continuous process
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Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : - Sub-scenario(s):

- 1- Stripping: Destillation - closed batch process
- 2- waste management: storage of waste prior to removal for off-site and/or on-site treatment
- 3- Filtering and filling: filtration, centrifugation, sieving and filling - enclosed dedicated lines
- 4- waste management: waste water treatment on site
- 5- Blending/emulsifying: closed batch process (with Sampling)
- 6- Polymerisation.: Mixing, heating, cooling - closed batch process (Sampling)
- 7- Mixing, Blending, completion: closed batch process (Sampling)

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : - Sub-scenario(s):

- 1- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes
- 2- Blending/emulsifying: batch or other processes (with Sampling)
- 3- Manufacturing Equipment cleaning: open in situ or open off-line in workplace (includes replacing filters during filtration)
- 4- Receipt and storage of raw materials of raw material: bulk raw material and Packaged goods delivery - Indoor and Outdoor
- 5- waste management: waste water treatment on site
- 6- Mixing, Blending, completion: Batch process (Sampling)
- 7- Polymerisation.: Mixing, heating, cooling - batch or other processes (Sampling)

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : - Sub-scenario(s):

- 1- Raw material assembly and charging: Raw material dispensing of liquids or Solids manually from bulk storage or packaged goods, also blending and dissolving of raw materials - Indoor open batch process (additions)
- 2- Blending/emulsifying: open batch process (with Sampling)
- 3- waste management: waste water treatment on site

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Further specification : - Spray-Drying: Spray-Drying

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : - Sub-scenario(s):

- 1- waste management: transfer of wastes to tanks and storage containers: off-line in workplace
- 2- Raw material assembly and charging: Raw material dispensing of liquids and Solids manually from bulk storage or packaged goods - Indoor and Outdoor
- 3- Manufacturing Equipment maintenance: Opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
- 4- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : - Sub-scenario(s):

- 1- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes
- 2- Manufacturing Equipment maintenance: Opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes
- 3- Raw material assembly and charging: Raw material dispensing of liquids or Solids manually from bulk storage or packaged goods - Indoor and Outdoor
- 4- waste management: transfer of wastes to tanks and storage containers: off-line in workplace

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : - Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : - Laboratory Use: QC & RD Laboratory Use

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers**

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004474
Freshwater sediments (mg/kg d.w.) : 0.016365
Marine water (mg/l) : 0.000563
Marine water sediments (mg/kg d.w.) : 0.00206
Agricultural soil (mg/kg dwt): 0.008841
Grassland (mg/kg dwt): 0.009089
Sewage Treatment Plant (mg/l) : 0.001112

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 60.476

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

SILIPON RN6068

ES 49 - Manufacture of aqueous polymer dispersions and dispersion powders - Use of Process Regulators for Polymerisation - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 50 - Manufacture of aqueous polymer dispersions and dispersion powders - Use of Processing Aids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Manufacture of aqueous polymer dispersions and dispersion powders - Formulation of preparations - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 50
Industry Association : EPDLA
Additional information : Site 1 + 2

EPDLA-WM6.2.2, EPDLA-M3.2, EPDLA-L1.2, EPDLA-M1.2, EPDLA-WM1.1.2, EPDLA-F3.3.2, EPDLA-RMH2.2, EPDLA-Sp.2, EPDLAC2.2, EPDLA-MM1.1.2, EPDLA-F2.2, EPDLA-C3.2, EPDLA-P3.2, EPDLA-P4.2, EPDLA-M2.2, EPDLA-RMS1.2, EPDLA-WM6.1.2, EPDLA-St2.2, EPDLA-F3.1.2, EPDLA-RMS2.1.2, EPDLA-P2.2, EPDLA-RMS3.2, EPDLA-WM2.2.2, EPDLA-C1.2, EPDLA-WM6.3.2, EPDLA-C4.2, EPDLA-P1.2, EPDLA-WM1.2.2, EPDLA-CI1.2, EPDLA-RMH1.2, EPDLA-WM6.4.2, EPDLA-WM2.1.2, EPDLAF3.4.2, EPDLA-WM5.2, EPDLA-C5.2, EPDLA-MM1.2.2, EPDLA-S1.2, EPDLA-CI2.2, EPDLA-F1.2, EPDLA-RMS2.2.2, EPDLA-WM6.5.2, EPDLA-F3.2.2, EPDLA-WM1.3.2, EPDLA-St1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Amounts used	: 0.5 Tonnes/year
Frequency and duration of use	: Release times per year: 20 time(s) per year
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 100% Release fraction to water from process: 100% Release fraction to soil from process: 5% Fraction used at main source: 100% Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- Filtering and filling: filtration, centrifugation, sieving and filling - enclosed dedicated lines 2- waste management: storage of waste prior to removal for off-site and/or on-site treatment 3- waste management: transfer of wastes to tanks and storage containers: off-line in workplace 4- Polymerisation.: Mixing, heating, cooling - closed process (Sampling) 5- waste management: waste water treatment on site 6- Receipt and storage of raw materials: bulk raw material and Packaged goods delivery - Indoor and Outdoor 7- Storage and delivery of finished products: in bulk and packaged goods, Indoor and Outdoor 8- waste management: Incineration On-site 9- Blending/emulsifying: closed process (with Sampling) 10- Raw material assembly and charging: Raw material dispensing of liquids and Solids via pipeline from bulk storage or packaged goods - Indoor and Outdoor
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- waste management: waste water treatment on site 2- Manufacturing Equipment cleaning: enclosed in situ in workplace or off-line in workplace 3- Polymerisation.: Mixing, heating, cooling - closed continuous process (Sampling) 4- Blending/emulsifying: closed continuous process (with Sampling) 5- Mixing, Blending, completion: closed continuous process (Sampling) 6- Stripping: closed continuous process
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Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : - Sub-scenario(s):

- 1- Stripping: Destillation - closed batch process
- 2- waste management: storage of waste prior to removal for off-site and/or on-site treatment
- 3- Filtering and filling: filtration, centrifugation, sieving and filling - enclosed dedicated lines
- 4- waste management: waste water treatment on site
- 5- Blending/emulsifying: closed batch process (with Sampling)
- 6- Polymerisation.: Mixing, heating, cooling - closed batch process (Sampling)
- 7- Mixing, Blending, completion: closed batch process (Sampling)

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : - Sub-scenario(s):

- 1- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes
- 2- Blending/emulsifying: batch or other processes (with Sampling)
- 3- Manufacturing Equipment cleaning: open in situ or open off-line in workplace (includes replacing filters during filtration)
- 4- Receipt and storage of raw materials of raw material: bulk raw material and Packaged goods delivery - Indoor and Outdoor
- 5- waste management: waste water treatment on site
- 6- Mixing, Blending, completion: Batch process (Sampling)
- 7- Polymerisation.: Mixing, heating, cooling - batch or other processes (Sampling)

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : - Sub-scenario(s):

- 1- Raw material assembly and charging: Raw material dispensing of liquids or Solids manually from bulk storage or packaged goods, also blending and dissolving of raw materials - Indoor open batch process (additions)
- 2- Blending/emulsifying: open batch process (with Sampling)
- 3- waste management: waste water treatment on site

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Further specification : - Spray-Drying: Spray-Drying

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Respiratory protection : Wear respiratory protection: 90% effectiveness

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : - Sub-scenario(s):

1- waste management: transfer of wastes to tanks and storage containers: off-line in workplace

2- Raw material assembly and charging: Raw material dispensing of liquids and Solids manually from bulk storage or packaged goods - Indoor and Outdoor

3- Manufacturing Equipment maintenance: Opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes

4- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : - Sub-scenario(s):

1- Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

2- Manufacturing Equipment maintenance: Opening of manufacturing equipment and pipework containing chemicals for repair or cleaning manufacturing equipment for maintenance purposes

3- Raw material assembly and charging: Raw material dispensing of liquids or Solids manually from bulk storage or packaged goods - Indoor and Outdoor

4- waste management: transfer of wastes to tanks and storage containers: off-line in workplace

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : - Filtering and filling: filtration, centrifugation, sieving and filling - batch or other processes

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : - Laboratory Use: QC & RD Laboratory Use

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Compartment: Fresh water
PEC: 0.096298 mg/l

Compartment: Freshwater sediment
PEC: 0.354832 mg/kg dwt

Compartment: Marine water
PEC: 0.009719 mg/l

Compartment: Marine water sediment
PEC: 0.035812 mg/kg dwt

Compartment: Agricultural soil
PEC: 0.007359 mg/kg dwt

Compartment: Grassland
PEC: 0.005708 mg/kg dwt

Compartment: STP
PEC: 0.88962 mg/l

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 60.476

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 51 - Formulation of Solventless/ Solvent Borne Adhesives - Solids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of Solventless/ Solvent Borne Adhesives - Solids - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC10, PROC14
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure** - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14

Number of the ES	: 51
Industry Association	: FEICA
Additional information	: Site 1 + 2 FEICA-F1.8.1, FEICA-F1.6.1, FEICA-F1.3.1, FEICA-F1.1.1, FEICA-F1.2.1, FEICA-F1.4.1, FEICA-F1.5.1, FEICAF1.7.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
FEICA SPERC Code 2.1a.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

276/934

Other given operational conditions affecting environmental exposure	: 0.01% Release fraction to air from process. 0.005% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004565
Freshwater sediments (mg/kg d.w.) : 0.016698
Marine water (mg/l) : 0.000572
Marine water sediments (mg/kg d.w.) : 0.002093
Agricultural soil (mg/kg dwt): 0.008575
Grassland (mg/kg dwt): 0.008574
Sewage Treatment Plant (mg/l) : 0.002022

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.045048

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.006857
Inhalation exposure (mg/m³) : 0.370
Combined routes (mg/kg bw/day): 0.059714

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.013714
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.10181

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.185
Combined routes (mg/kg bw/day): 0.163571

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.27486
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.450476

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.068571
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.156667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

**ES 51 - Formulation of Solventless/ Solvent Borne
Adhesives - Solids - Industrial - Sulfuric acid, mono-
C12-14-alkyl esters, sodium salts**

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 52 - Formulation of Water Borne adhesives - Solids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of Water Borne adhesives - Solids - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC03, PROC04, PROC05, PROC08b, PROC09, PROC10, PROC14
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure** - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14

Number of the ES	: 52
Industry Association	: FEICA
Additional information	: Site 1 + 2 FEICA-F1.3.2, FEICA-F1.1.2, FEICA-F1.6.2, FEICA-F1.4.2, FEICA-F1.7.2, FEICA-F1.2.2, FEICA-F1.5.2, FEICA-F1.8.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
FEICA SPERC Code 2.2b.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0.01% Release fraction to air from process. 0.005% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

**Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by
tableting, compression, extrusion, pelletisation****Frequency and duration of use** : Duration of activity >4 hours**Area of use:** : Indoor**Technical conditions and measures to control dispersion from source towards the worker** : Local Exhaust Ventilation (LEV) is required.**Conditions and measures related to personal protection and hygiene****Personal protection** : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours**Respiratory protection** : Wear respiratory protection: 90%.**Section 3 - Exposure estimation and reference to its source****Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004565
Freshwater sediments (mg/kg d.w.) : 0.016698
Marine water (mg/l) : 0.000572
Marine water sediments (mg/kg d.w.) : 0.002093
Agricultural soil (mg/kg dwt): 0.008575
Grassland (mg/kg dwt): 0.008574
Sewage Treatment Plant (mg/l) : 0.002022**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.045048**Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.006857
Inhalation exposure (mg/m³) : 0.370
Combined routes (mg/kg bw/day): 0.059714

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.013714
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.10181

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.185
Combined routes (mg/kg bw/day): 0.163571

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.27486
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.450476

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.068571
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.156667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

**ES 52 - Formulation of Water Borne adhesives - Solids -
Industrial - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts**

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 53 - Industrial Use of Solvents in Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile, Others Adhesives - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial Use of Solvents in Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile, Others Adhesives - Solids - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC04, PROC05, PROC07, PROC08b, PROC09, PROC10, PROC13, PROC14
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix** - ERC05

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure** - PROC02
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14

Number of the ES : 53
Industry Association : FEICA
Additional information : Site 1 + 2

FEICA-I6.3, FEICA-I10.3, FEICA-I2.3, FEICA-I8.3, FEICA-I11.3, FEICA-I5.3, FEICA-I7.3, FEICA-I4.3, FEICA-I9.3, FEICA-I3.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix

Further specification	: Specific Environmental Release Category: FEICA SPERC Code 5.2a.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 20% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 13.2% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.015959
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.008989
 Grassland (mg/kg dwt): 0.009354
 Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.027429
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.045048

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.137143
 Inhalation exposure (mg/m³) : 0.616667
 Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.013714
 Inhalation exposure (mg/m³) : 0.616667
 Combined routes (mg/kg bw/day): 0.10181

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.428571
 Inhalation exposure (mg/m³) : 6.167
 Combined routes (mg/kg bw/day): 1.31

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.137143
 Inhalation exposure (mg/m³) : 0.185
 Combined routes (mg/kg bw/day): 0.163571

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.27486
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.450476

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.313333

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.068571
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.156667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 54 - Industrial Use of Solvents in Transportation (Automotive/aircraft/rail vehicles) / industrial Building Construction Adhesives - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial Use of Solvents in Transportation (Automotive/aircraft/rail vehicles) / industrial Building Construction Adhesives - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC04, PROC05, PROC07, PROC08b, PROC09, PROC10, PROC13, PROC14
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix** - ERC05

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure** - PROC02
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14

Number of the ES	: 54
Industry Association	: FEICA
Additional information	: Site 1 + 2 FEICA-I6.4, FEICA-I8.4, FEICA-I5.4, FEICA-I2.4, FEICA-I4.4, FEICA-I7.4, FEICA-I10.4, FEICA-I3.4, FEICA-I1.4, FEICA-I9.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix

Further specification : Specific Environmental Release Category:
FEICA SPERC Code 5.2b.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Date of issue/Date of revision : ^ (ES Revision date)

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Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 20% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 41.8% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008989
Grassland (mg/kg dwt): 0.009354
Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.045048

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.013714
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.10181

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.428571
Inhalation exposure (mg/m³) : 6.167
Combined routes (mg/kg bw/day): 1.31

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.185
Combined routes (mg/kg bw/day): 0.163571

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.27486
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.450476

SILIPON RN6068

ES 54 - Industrial Use of Solvents in Transportation
(Automotive/aircraft/rail vehicles) / industrial Building
Construction Adhesives - Sulfuric acid, mono-
C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.313333

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.068571
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.156667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 55 - Industrial Use of Substances other than Solvents in Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile, Others Adhesives - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial Use of Substances other than Solvents in Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile, Others Adhesives - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC04, PROC05, PROC07, PROC08b, PROC09, PROC10, PROC13, PROC14
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix** - ERC05

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure** - PROC02
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14

Number of the ES : 55
Industry Association : FEICA
Additional information : Site 1 + 2

FEICA-I5.1, FEICA-I6.1, FEICA-I8.1, FEICA-I1.1, FEICA-I9.1, FEICA-I10.1, FEICA-I7.1, FEICA-I4.1, FEICA-I2.1, FEICA-I3.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC05: Industrial use resulting in inclusion into or onto a matrix**

Further specification : Specific Environmental Release Category:
FEICA SPERC Code 5.1a.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Date of issue/Date of revision : ^(ES Revision date)

300/934

SILIPON RN6068

ES 55 - Industrial Use of Substances other than Solvents in Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile, Others Adhesives - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0.9% Release fraction to air from process.
0% Release fraction to surface water from process.
0% Release fraction to soil from process.
2.2% Fraction used at main source.
100% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.015959
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.008989
 Grassland (mg/kg dwt): 0.009354
 Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.045048

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.013714
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.10181

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.428571
Inhalation exposure (mg/m³) : 6.167
Combined routes (mg/kg bw/day): 1.31

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.185
Combined routes (mg/kg bw/day): 0.163571

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

SILIPON RN6068

ES 55 - Industrial Use of Substances other than Solvents in Paper, Board and related Products / Woodworking and joinery / Footwear and Leather, Textile, Others Adhesives - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.27486
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.450476

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.313333

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.068571
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.156667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 56 - Industrial Use of Substances other than Solvents in Transportation (Automotive/aircraft/rail vehicles) / industrial Building Construction Adhesives - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial Use of Substances other than Solvents in Transportation (Automotive/aircraft/rail vehicles) / industrial Building Construction Adhesives - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC04, PROC05, PROC07, PROC08b, PROC09, PROC10, PROC13, PROC14
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix** - ERC05

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure** - PROC02
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14

Number of the ES	: 56
Industry Association	: FEICA
Additional information	: Site 1 + 2 FEICA-I6.2, FEICA-I4.2, FEICA-I3.2, FEICA-I1.2, FEICA-I2.2, FEICA-I9.2, FEICA-I10.2, FEICA-I7.2, FEICA-I5.2, FEICA-I8.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix

Further specification : Specific Environmental Release Category:
FEICA SPERC Code 5.1b.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Date of issue/Date of revision : ^(ES Revision date)

306/934

Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 1.7% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 17.6% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.015959
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.008989
 Grassland (mg/kg dwt): 0.009354
 Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.027429
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.045048

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.013714
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.10181

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.428571
Inhalation exposure (mg/m³) : 6.167
Combined routes (mg/kg bw/day): 1.31

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.185
Combined routes (mg/kg bw/day): 0.163571

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.225238

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.27486
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.450476

SILIPON RN6068

ES 56 - Industrial Use of Substances other than Solvents in Transportation (Automotive/aircraft/rail vehicles) / industrial Building Construction Adhesives - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.313333

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.068571
Inhalation exposure (mg/m³) : 0.616667
Combined routes (mg/kg bw/day): 0.156667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 57 - Formulating Batch Mixing : Limited Exposure - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulating Batch Mixing: Limited Exposure - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC04
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02
Health Contributing scenarios : **PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises** - PROC04

Number of the ES : 57
Additional information : Site 1 + 2
FECC 2.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Amounts used : 500 Tonnes/year
Frequency and duration of use : Release times per year: 100
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 2.5% Release fraction to air from process.
2% Release fraction to surface water from process.
0.01% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: **PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**

Frequency and duration of use : Duration of activity >4 hours
Area of use : Indoor
Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source**Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009985
Grassland (mg/kg dwt): 0.00902
Sewage Treatment Plant (mg/l) : 0.889639**Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667**Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES****Environment** : Not available.**Health** : Not available.**Additional good practice advice beyond the REACH CSA****Environment** : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 58 - Formulating Batch Mixing : Significant Contact - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulating Batch Mixing: Significant Contact - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05

Number of the ES	: 58
Additional information	: Site 1 + 2 FECC 2.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Amounts used	: 500 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 2.5% Release fraction to air from process. 2% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.093327
 Freshwater sediments (mg/kg d.w.) : 0.341366
 Marine water (mg/l) : 0.009448
 Marine water sediments (mg/kg d.w.) : 0.03456
 Agricultural soil (mg/kg dwt): 0.009985
 Grassland (mg/kg dwt): 0.00902
 Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 22.524

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 59 - Formulating Closed System Mixing - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulating Closed System Mixing - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC03
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02
Health Contributing scenarios : **PROC03: Use in closed batch process (synthesis or formulation)** - PROC03

Number of the ES	: 59
Additional information	: Site 1 + 2
	FECC 2.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Amounts used	: 500 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 2.5% Release fraction to air from process. 2% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: **PROC03: Use in closed batch process (synthesis or formulation)**

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.093327
- Freshwater sediments (mg/kg d.w.) : 0.341366
- Marine water (mg/l) : 0.009448
- Marine water sediments (mg/kg d.w.) : 0.03456
- Agricultural soil (mg/kg dwt): 0.009985
- Grassland (mg/kg dwt): 0.00902
- Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): 0.342857
- Inhalation exposure (mg/m³) : 37
- Combined routes (mg/kg bw/day): 5.629

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 60 - Formulating Compressing, Extruding, Tableting - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulating Compressing, Extruding, Tableting - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC14
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation** - PROC14

Number of the ES	: 60
Additional information	: Site 1 + 2
	FECC 2.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Amounts used	: 500 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 2.5% Release fraction to air from process. 2% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: **PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation**

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source**Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009985
Grassland (mg/kg dwt): 0.00902
Sewage Treatment Plant (mg/l) : 0.889639**Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238**Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES****Environment** : Not available.**Health** : Not available.**Additional good practice advice beyond the REACH CSA****Environment** : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 61 - Formulating physically bonded Batch Mixing : Limited Exposure (physically bonded systems) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulating physically bonded Batch Mixing: Limited Exposure (physically bonded systems) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC04
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC03

Environmental contributing scenarios : **ERC03: Formulation in materials - ERC03**

Health Contributing scenarios : **PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04**

Number of the ES	: 61
Additional information	: Site 1 + 2 FECC 3.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC03: Formulation in materials

Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 30% Release fraction to air from process. 0.2% Release fraction to surface water from process. 0.1% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC03: Formulation in materials

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.022156
Freshwater sediments (mg/kg d.w.) : 0.08104
Marine water (mg/l) : 0.002331
Marine water sediments (mg/kg d.w.) : 0.008527
Agricultural soil (mg/kg dwt): 0.013423
Grassland (mg/kg dwt): 0.017474
Sewage Treatment Plant (mg/l) : 0.177928

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 62 - Formulating physically bonded Batch Mixing : Significant Contact (physically bonded systems) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulating physically bonded Batch Mixing: Significant Contact (physically bonded systems) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC03

Environmental contributing scenarios : **ERC03: Formulation in materials - ERC03**

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05**

Number of the ES	: 62
Additional information	: Site 1 + 2 FECC 3.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC03: Formulation in materials

Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 30% Release fraction to air from process. 0.2% Release fraction to surface water from process. 0.1% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC03: Formulation in materials

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.022156
Freshwater sediments (mg/kg d.w.) : 0.08104
Marine water (mg/l) : 0.002331
Marine water sediments (mg/kg d.w.) : 0.008527
Agricultural soil (mg/kg dwt): 0.013423
Grassland (mg/kg dwt): 0.017474
Sewage Treatment Plant (mg/l) : 0.177928

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 63 - Formulating physically bonded Calendering - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulating physically bonded Calendering - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC06
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC03
Environmental contributing scenarios : **ERC03: Formulation in materials - ERC03**
Health Contributing scenarios : **PROC06: Calendering operations - PROC06**

Number of the ES : 63
Additional information : Site 1 + 2
FECC 3.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC03: Formulation in materials**

Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 100
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 30% Release fraction to air from process.
0.2% Release fraction to surface water from process.
0.1% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: **PROC06: Calendering operations**

Frequency and duration of use : Duration of activity >4 hours
Area of use : Indoor
Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC03: Formulation in materials

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.022156
Freshwater sediments (mg/kg d.w.) : 0.08104
Marine water (mg/l) : 0.002331
Marine water sediments (mg/kg d.w.) : 0.008527
Agricultural soil (mg/kg dwt): 0.013423
Grassland (mg/kg dwt): 0.017474
Sewage Treatment Plant (mg/l) : 0.177928

Exposure estimation and reference to its source - Workers: PROC06: Calendering operations

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 36.238

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 64 - Formulating physically bonded Closed System Mixing (physically bonded systems) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulating physically bonded Closed System Mixing (physically bonded systems) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC03
Substance supplied to that use in form of: In a mixture, As such
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC03
Environmental contributing scenarios : **ERC03: Formulation in materials - ERC03**
Health Contributing scenarios : **PROC03: Use in closed batch process (synthesis or formulation) - PROC03**

Number of the ES	: 64
Additional information	: Site 1 + 2
	FECC 3.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC03: Formulation in materials**

Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 30% Release fraction to air from process. 0.2% Release fraction to surface water from process. 0.1% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: **PROC03: Use in closed batch process (synthesis or formulation)**

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC03: Formulation in materials

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.022156
Freshwater sediments (mg/kg d.w.) : 0.08104
Marine water (mg/l) : 0.002331
Marine water sediments (mg/kg d.w.) : 0.008527
Agricultural soil (mg/kg dwt): 0.013423
Grassland (mg/kg dwt): 0.017474
Sewage Treatment Plant (mg/l) : 0.177928

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 65 - Formulating physically bonded Compressing, Extruding, Tableting (Physically bonded systems) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulating physically bonded Compressing, Extruding, Tableting (physically bonded systems) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Process Category: PROC14

Substance supplied to that use in form of: As such, In a mixture

Sector of end use: SU03

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC03

Environmental contributing scenarios : **ERC03: Formulation in materials** - ERC03

Health Contributing scenarios : **PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation** - PROC14

Number of the ES	: 65
Additional information	: Site 1 + 2
	FECC 3.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC03: Formulation in materials

Amounts used : 1400 Tonnes/year

Frequency and duration of use : Release times per year: 100

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 30% Release fraction to air from process.
0.2% Release fraction to surface water from process.
0.1% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC03: Formulation in materials

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.029273
Freshwater sediments (mg/kg d.w.) : 0.107073
Marine water (mg/l) : 0.003043
Marine water sediments (mg/kg d.w.) : 0.011131
Agricultural soil (mg/kg dwt): 0.015363
Grassland (mg/kg dwt): 0.021035
Sewage Treatment Plant (mg/l) : 0.249099

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 66 - Formulation & packing of mixtures in batch or continuous operations, including storage, materials transfers, large and small scale packing, and maintenance - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Formulation & packing of mixtures in batch or continuous operations, including storage, materials transfers, large and small scale packing, and maintenance - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 66
Industry Association : ConcaWE
Additional information : Site 1 + 2

CONCAWE-2.9, CONCAWE-2.2, CONCAWE-2.6, CONCAWE-2.7, CONCAWE-2.3, CONCAWE-2.5, CONCAWE-2.4, CONCAWE-2.8, CONCAWE-2.1)

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Further specification : Specific Environmental Release Category:
ESVOC SPERC Code 2.2.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 300

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068

ES 66 - Formulation & packing of mixtures in batch or continuous operations, including storage, materials transfers, large and small scale packing, and maintenance - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0.25% Release fraction to air from process.
0.5% Release fraction to surface water from process.
0.01% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

SILIPON RN6068

ES 66 - Formulation & packing of mixtures in batch or continuous operations, including storage, materials transfers, large and small scale packing, and maintenance - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

SILIPON RN6068

ES 66 - Formulation & packing of mixtures in batch or continuous operations, including storage, materials transfers, large and small scale packing, and maintenance - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.01919
Freshwater sediments (mg/kg d.w.) : 0.070193
Marine water (mg/l) : 0.002035
Marine water sediments (mg/kg d.w.) : 0.007443
Agricultural soil (mg/kg dwt): 0.008813
Grassland (mg/kg dwt): 0.008658
Sewage Treatment Plant (mg/l): 0.148273

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

SILIPON RN6068

ES 66 - Formulation & packing of mixtures in batch or continuous operations, including storage, materials transfers, large and small scale packing, and maintenance - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Date of issue/Date of revision : ^ (ES Revision date)

334/934

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 67 - Formulation of preparations - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Formulation of preparations - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC24, PC34
Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02
Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05

Number of the ES : 67
Industry Association : TEGEWA
Additional information : Site 1 + 2
TEGEWA-F1.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*
Amounts used : 400 Tonnes/year
Frequency and duration of use : Release times per year: 100
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 2.5% Release fraction to air from process.
2% Release fraction to surface water from process.
0.01% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.075534
 Freshwater sediments (mg/kg d.w.) : 0.276285
 Marine water (mg/l) : 0.007669
 Marine water sediments (mg/kg d.w.) : 0.028052
 Agricultural soil (mg/kg dwt): 0.009702
 Grassland (mg/kg dwt): 0.00893
 Sewage Treatment Plant (mg/l) : 0.711711

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 1.162
 Combined routes (mg/kg bw/day): 13.88

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 68 - General industrial use of lubricants and greases in vehicles or machinery - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** General industrial use of lubricants and greases in vehicles or machinery - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC17, PC24

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES	: 68
Industry Association	: ATIEL/ATC
Processes and activities covered by the exposure scenario	: Includes filling and draining of containers and enclosed machinery (including engines)
Additional information	: Site 1 + 2 ATIEL-Group_BI1.3.1.1, ATIEL-Group_BI1.5.1, ATIEL-Group_BI1.1.1, ATIEL-Group_BI1.6.1, ATIEL-Group_BI1.3.1.2, ATIEL-Group_BI1.2.1, ATIELGroup_BI1.4.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Amounts used : 2 Tonnes/year

Frequency and duration of use : Release times per year: 20

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
100% Release fraction to surface water from process.
5% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Date of issue/Date of revision : ^ (ES Revision date)

337/934

SILIPON RN6068	ES 68 - General industrial use of lubricants and greases in vehicles or machinery - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure	
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure	
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Date of issue/Date of revision	: ^(ES Revision date)

Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.093327 Freshwater sediments (mg/kg d.w.) : 0.341366 Marine water (mg/l) : 0.009448 Marine water sediments (mg/kg d.w.) : 0.003456 Agricultural soil (mg/kg dwt): 0.009824 Grassland (mg/kg dwt): 0.008709 Sewage Treatment Plant (mg/l) : 0.889639
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Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.123333 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 69 - General industrial use of lubricants and greases in vehicles or machinery (Closed System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** General industrial use of lubricants and greases in vehicles or machinery (closed System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC07
Market sector by type of chemical product: PC17, PC24

Environmental contributing scenarios : **ERC07: Industrial use of substances in closed systems - ERC07**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES	: 69
Industry Association	: ATIEL/ATC
Processes and activities covered by the exposure scenario	: Includes filling and draining of containers and enclosed machinery (including engines)
Additional information	: Site 1 + 2 ATIEL-Group_BI1.4.2, ATIEL-Group_BI1.1.2, ATIEL-Group_BI1.3.2.1, ATIEL-Group_BI1.2.2, ATIEL-Group_BI1.6.2, ATIEL-Group_BI1.3.2.2, ATIEL-Group_BI1.5.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC07: Industrial use of substances in closed systems	
Amounts used	: 40 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 5% Release fraction to air from process. 5% Release fraction to surface water from process. 5% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

340/934

SILIPON RN6068	ES 69 - General industrial use of lubricants and greases in vehicles or machinery (Closed System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure	
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure	
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC07: Industrial use of substances in closed systems	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Date of issue/Date of revision	: ^(ES Revision date)

SILIPON RN6068	ES 69 - General industrial use of lubricants and greases in vehicles or machinery (Closed System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.093327 Freshwater sediments (mg/kg d.w.) : 0.341366 Marine water (mg/l) : 0.009448 Marine water sediments (mg/kg d.w.) : 0.003456 Agricultural soil (mg/kg dwt): 0.009824 Grassland (mg/kg dwt): 0.008709 Sewage Treatment Plant (mg/l) : 0.889639
Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 0.123333 Combined routes (mg/kg bw/day): 0.360476
Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 12.333 Combined routes (mg/kg bw/day): 3.133
Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667
Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 15.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 70 - Handling (Non-Reactive Processing Aids) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Handling (Non-Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC20, PC23, PC24, PC32, PC34

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities** - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES	: 70
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-F3.1, TEGEWA-T3.2, TEGEWA-L2.3, TEGEWA-L2.1, TEGEWA-T3.1, TEGEWA-L2.2, TEGEWA-T3.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Amounts used	: 1 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 100% Release fraction to air from process. 100% Release fraction to surface water from process. 5% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.

Date of issue/Date of revision : ^ (ES Revision date)

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Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity: 60 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Sub-scenario(s):
1- with local exhaust ventilation
2- Without LEV

Frequency and duration of use : Duration of activity / Sub-scenario(s):
1- with local exhaust ventilation: >4 hours
2- Without LEV: 60 min/day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s):
1- with local exhaust ventilation
2- Without LEV

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of:
1- with local exhaust ventilation > 4 hour(s)
2- Without LEV: 1 - 4 hour(s).

Respiratory protection : Sub-scenario(s):
1- with local exhaust ventilation: None.
2- Without LEV: Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity: 60 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.048845
Freshwater sediments (mg/kg d.w.) : 0.178662
Marine water (mg/l) : 0.005
Marine water sediments (mg/kg d.w.) : 0.001829
Agricultural soil (mg/kg dwt): 0.009197
Grassland (mg/kg dwt): 0.000864
Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 1.542
Combined routes (mg/kg bw/day): 2.963

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations
respectively [with local exhaust ventilation; Without LEV]:
Dermal exposure (mg/kg bw/day): [0.137143; 1.371]
Inhalation exposure (mg/m³) : [1.85; 0.0770833]
Combined routes (mg/kg bw/day): [0.401429; 1.482]

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 0.770833
Combined routes (mg/kg bw/day): 1.482

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 71 - Handling and dilution of metalworking fluid concentrates - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Handling and dilution of metalworking fluid concentrates - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05, PROC08b
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC25

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b

Number of the ES : 71
Additional information : Site 1 + 2

ATIEL-Group_EI.1.2.2, ATIEL-Group_EI.1.4, ATIEL-Group_EI.1.3, ATIELGroup_EI.1.2.1, ATIEL-Group_EI.1.1.1, ATIEL-Group_EI.1.1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Amounts used : 500 Tonnes/year

Frequency and duration of use : Release times per year: 100

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 2.5% Release fraction to air from process.
2% Release fraction to surface water from process.
0.01% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.093327
 Freshwater sediments (mg/kg d.w.) : 0.341366
 Marine water (mg/l) : 0.009448
 Marine water sediments (mg/kg d.w.) : 0.03456
 Agricultural soil (mg/kg dwt): 0.009985
 Grassland (mg/kg dwt): 0.00902
 Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 15.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 71 - Handling and dilution of metalworking fluid concentrates - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 72 - Industrial Solvent use (Processing aid) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial Solvent use (Processing aid) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC03, PROC07, PROC08a, PROC08b, PROC10, PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure** - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 72
Additional information	: Site 1 + 2 FEICA-I4.1, FEICA-I5.1, FEICA-I6.1, FEICA-I8.1, FEICA-I3.1, FEICA-I7.1, FEICA-I2.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Amounts used : 2 Tonnes/year

Frequency and duration of use : Release times per year: 20

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
100% Release fraction to surface water from process.
5% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Date of issue/Date of revision : ^(ES Revision date)

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Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.093327
 Freshwater sediments (mg/kg d.w.) : 0.341366
 Marine water (mg/l) : 0.009448
 Marine water sediments (mg/kg d.w.) : 0.03456
 Agricultural soil (mg/kg dwt): 0.009985
 Grassland (mg/kg dwt): 0.00902
 Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.027429
 Inhalation exposure (mg/m³) : 0.12333
 Combined routes (mg/kg bw/day): 0.045048

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.006857
 Inhalation exposure (mg/m³) : 0.370
 Combined routes (mg/kg bw/day): 0.059714

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.428571
 Inhalation exposure (mg/m³) : 6.167
 Combined routes (mg/kg bw/day): 1.31

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.027429
 Inhalation exposure (mg/m³) : 1.233
 Combined routes (mg/kg bw/day): 0.203619

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 0.185
Combined routes (mg/kg bw/day): 0.163571

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.274286
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.450476

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.313333

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 73 - Industrial Use of Façade/surface Cleaning Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Industrial Use of Façade/surface Cleaning Products - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC07, PROC08a
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC35
Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**
Health Contributing scenarios : **PROC07: Industrial spraying - PROC07**
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a

Number of the ES : 73
Additional information : Site 1 + 2
AISE-P906.2, AISE-P907.2, AISE-P906.1, AISEP907.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**
Further specification : Specific Environmental Release Category: AISE SPERC Code 4.1.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 220
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
1.1% Fraction used at main source.
100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant AISE SPERC factsheet
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity: 480 min/day

Area of use: : Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity: 10 min/day

Area of use: : Outdoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: < 15 minutes.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.048845
Freshwater sediments (mg/kg d.w.) : 0.178662
Marine water (mg/l) : 0.005
Marine water sediments (mg/kg d.w.) : 0.01829
Agricultural soil (mg/kg dwt): 0.009182
Grassland (mg/kg dwt): 0.00861
Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 8.571
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 20.905

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 1.799
Combined routes (mg/kg bw/day): 3

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 74 - Industrial formulation of fuel additives and fuel blends - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial formulation of fuel additives and fuel blends - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC13, PC19

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 74

Additional information : Site 1 + 2

ATC-Group_AI.10, ATC-Group_AI.5.1, ATC-Group_AI.6, ATC-Group_AI.9, ATC-Group_AI.3, ATC-Group_AI.8, ATC-Group_AI.7, ATC-Group_AI.1, ATC-Group_AI.13, ATC-Group_AI.4.2, ATCGroup_AI.11, ATC-Group_AI.12, ATC-Group_AI.2, ATC-Group_AI.4.1, ATC-Group_AI.5.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***

Amounts used : 500 Tonnes/year

Frequency and duration of use : Release times per year: 100

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 2.5% Release fraction to air from process. 2% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.093327
 Freshwater sediments (mg/kg d.w.) : 0.341366
 Marine water (mg/l) : 0.009448
 Marine water sediments (mg/kg d.w.) : 0.03456
 Agricultural soil (mg/kg dwt): 0.009985
 Grassland (mg/kg dwt): 0.00902
 Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 75 - Industrial formulation of lubricants additives, lubricants and greases - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Industrial formulation of lubricant additives, lubricants and greases - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC17, PC24, PC25

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC03: Use in closed batch process (synthesis or formulation)** - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 75

Additional information : Site 1 + 2

ATIEL-Group_AI.1.11, ATIELGroup_AI.1.7, ATIEL-Group_AI.1.9, ATIEL-Group_AI.1.5, ATIEL-Group_AI.1.3.1, ATIELGroup_AI.1.10, ATIEL-Group_AI.1.3.2, ATIEL-Group_AI.1.4, ATIEL-Group_AI.1.6, ATIELGroup_AI.1.2.1, ATIEL-Group_AI.1.8, ATIEL-Group_AI.1.1, ATIEL-Group_AI.1.2.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Amounts used : 500 Tonnes/year
Frequency and duration of use : Release times per year: 100

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 2.5% Release fraction to air from process.
2% Release fraction to surface water from process.
0.01% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

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<p>SILIPON RN6068</p>	<p>ES 75 - Industrial formulation of lubricants additives, lubricants and greases - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts</p>
<p>Conditions and measures related to municipal sewage treatment plant</p>	<p>: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000</p>
<p>Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)</p> <p>Frequency and duration of use : Duration of activity >4 hours</p> <p>Other given operational conditions affecting workers exposure : Indoor</p> <p>Conditions and measures related to personal protection and hygiene</p>	
<p>Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>Frequency and duration of use : Duration of activity >4 hours</p> <p>Other given operational conditions affecting workers exposure : Indoor</p> <p>Conditions and measures related to personal protection and hygiene</p>	
<p>Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)</p> <p>Frequency and duration of use : Duration of activity >4 hours</p> <p>Other given operational conditions affecting workers exposure : Indoor</p> <p>Conditions and measures related to personal protection and hygiene</p>	
<p>Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>Frequency and duration of use : Duration of activity >4 hours</p> <p>Other given operational conditions affecting workers exposure : Indoor</p> <p>Conditions and measures related to personal protection and hygiene</p>	
<p>Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>Frequency and duration of use : Duration of activity >4 hours</p> <p>Other given operational conditions affecting workers exposure : Indoor</p> <p>Conditions and measures related to personal protection and hygiene</p>	

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)**Frequency and duration of use** : Duration of activity >4 hours**Other given operational conditions affecting workers exposure** : Indoor**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent****Frequency and duration of use** : Duration of activity >4 hours**Other given operational conditions affecting workers exposure** : Indoor**Conditions and measures related to personal protection and hygiene****Section 3 - Exposure estimation and reference to its source****Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009985
Grassland (mg/kg dwt): 0.00902
Sewage Treatment Plant (mg/l) : 0.889639**Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629**Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 76 - Industrial oil field well drilling and production operations (including drilling muds and well cleaning) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Oil field well drilling and production operations (including drilling muds and well cleaning) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04
Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b

Number of the ES	: 76
Processes and activities covered by the exposure scenario	: (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance
Additional information	: Site 1 + 2 CONCAWE5A.3, CONCAWE5A.6, CONCAWE5A.5, CONCAWE5A.2, CONCAWE5A.4, CONCAWE5A.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for:	ERC04: Industrial use of processing aids in processes and products, not becoming part of articles
Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 4.5a.v1
Amounts used	: 40 Tonnes/year
Frequency and duration of use	: Release times per year: 30
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure	: 0.01% Release fraction to air from process. 7% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.087396
 Freshwater sediments (mg/kg d.w.) : 0.319672
 Marine water (mg/l) : 0.008855
 Marine water sediments (mg/kg d.w.) : 0.032391
 Agricultural soil (mg/kg dwt): 0.009712
 Grassland (mg/kg dwt): 0.008644
 Sewage Treatment Plant (mg/l) : 0.83033

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 77 - Industrial use in formulated MWFs/rolling oils - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial use in formulated MWFs/rolling oils - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC17
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC17: Lubrication at high energy conditions and in partly open process - PROC17

Number of the ES	: 77
Processes and activities covered by the exposure scenario	: including transfer operations, open rolling and annealing activities, open and contained cutting/machining activities, draining and working on contaminated/reject articles, recycling and disposal of waste oils
Additional information	: Site 1 + 2 CONCAWE7A.6, CONCAWE7A.4, CONCAWE7A.11, CONCAWE7A.8, CONCAWE7A.9, CONCAWE7A.10, CONCAWE7A.12, CONCAWE7A.3, CONCAWE7A.2, CONCAWE7A.5, CONCAWE7A.1, CONCAWE7A.7.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 4.7a.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0.6% Release fraction to air from process. 0.1% Release fraction to surface water from process. 0% Release fraction to soil from process. 10% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%
Frequency and duration of use	: Duration of activity >4 hours
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.08811
- Freshwater sediments (mg/kg d.w.) : 0.032229
- Marine water (mg/l) : 0.000997
- Marine water sediments (mg/kg d.w.) : 0.003646
- Agricultural soil (mg/kg dwt): 0.008641
- Grassland (mg/kg dwt): 0.008593
- Sewage Treatment Plant (mg/l) : 0.044482

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): 0.342857
- Inhalation exposure (mg/m³) : 0.123333
- Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 246.667
Combined routes (mg/kg bw/day): 78.095

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 45.048

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 246.667
Combined routes (mg/kg bw/day): 62.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 78 - Industrial use of Food beverage and pharmacos products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Industrial use of Food beverage and pharmacos products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC04, PROC07, PROC08a, PROC08b, PROC10, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**
Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES : 78

Additional information : Site 1 + 2

AISE-P802.1, AISE-P803.1, AISE-P811.2, AISE-P806.2, AISE-P811.1, AISE-P804.1, AISE-P810.2, AISE-P802.2, AISE-P801.2, AISE-P809.1, AISE-P804.2, AISE-P801.1, AISE-P807.1, AISE-P807.2, AISE-P809.2, AISE-P803.2, AISE-P805.1, AISE-P806.1, AISE-P810.1, AISE-P805.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 4.1.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m³/d

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 100% Release fraction to surface water from process. 0% Release fraction to soil from process. 1.1% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Sub-scenario(s): 1- Defoaming product; Automatic Process 2- Food process cleaner; Cleaning In Place (CIP) process
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%
Frequency and duration of use	: Duration of activity: 1 min/day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification	: Food process cleaner; Semi closed cleaning process
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%
Frequency and duration of use	: Duration of activity: 480 min/day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Further specification	: Sub-scenario(s): 1- Foam cleaner; Semi-automatic without venting process 2- Foam cleaner; Semi-automatic with venting process 3- Chain maintenance product; Automatic spray process 4- Disinfectant; Fogging and gassing Semi-automatic process
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%
Frequency and duration of use	: Sub-scenario(s) - Duration of activity (min/day): 1- 60 2- 60 3- 480 4- 30

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) 2 : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : - Sub-scenario(s) 1; 2; 4 : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s)

- Sub-scenario(s) 3 : None.

Respiratory protection : Sub-scenario(s) 1; 4 : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Facade/Surface cleaner Sub-scenario(s):
 1- Foam cleaner; Semi-automatic with venting process
 2- Chain maintenance product; Automatic spray process
 3- Animal housing care; Semi-Automatic process
 4- Foam cleaner; Semi-automatic without venting process
 5- Disinfectant; Fogging and gassing Semi-automatic process
 6- Chain maintenance product; Automatic drip and brush process
 7- Disinfectant; Semi-automatic process

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%

Frequency and duration of use : Sub-scenario(s) - Duration of activity (min/day):
 1- 5
 2- 15
 3- 16
 4- 5
 5- 5
 6- 15
 7- 16

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) 1 : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 1; 4; 5; 6 : Wear protective gloves: 80%, permeation breakthrough time of: < 15 minutes.

Sub-scenario(s) 2 : Wear protective gloves: 80%, permeation breakthrough time of: 15 - 60 minutes

Sub-scenario(s) 3; 7 : None.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Sub-scenario(s):
 1- Defoaming product; Automatic Process
 2- Food process cleaner; Semi closed cleaning process
 3- Food process cleaner; Cleaning In Place (CIP) process

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%

Frequency and duration of use : Sub-scenario(s) - Duration of activity (min/day):
 1- 15
 2- 5
 3- 5

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of:
 1- 15 - 60 minutes
 2- < 15 minutes
 3- < 15 minutes.

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further specification : Sub-scenario(s):
 1- Animal housing care; Semi-Automatic process
 2- Disinfectant; Semi-automatic process

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%

Frequency and duration of use : Sub-scenario(s) - Duration of activity (min/day):
 1- 480
 2- 240

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%

Frequency and duration of use : Duration of activity: 480 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.048845
 Freshwater sediments (mg/kg d.w.) : 0.178662
 Marine water (mg/l) : 0.005
 Marine water sediments (mg/kg d.w.) : 0.01829
 Agricultural soil (mg/kg dwt): 0.009182
 Grassland (mg/kg dwt): 0.00861
 Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.000257
 Combined routes (mg/kg bw/day): 0.342894

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):
 1- Foam cleaner; Semi-automatic without venting process
 2- Foam cleaner; Semi-automatic with venting process
 3- Chain maintenance product; Automatic spray process
 4- Disinfectant; Fogging and gassing Semi-automatic process

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 1- 8.571
 2 - 0.428571
 3 - 42.857
 4 - 8.571
 Inhalation exposure (mg/m³) :
 1- 15.417
 2- 7.708
 3- 246.667
 4- 7.708
 Combined routes (mg/kg bw/day):
 1- 10.774
 2- 1.53
 3- 78.095
 4- 9.673

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):

- 1- Foam cleaner; Semi-automatic with venting process
- 2- Chain maintenance product; Automatic spray process
- 3- Animal housing care; Semi-Automatic process
- 4- Foam cleaner; Semi-automatic without venting process
- 5- Disinfectant; Fogging and gassing Semi-automatic process
- 6- Chain maintenance product; Automatic drip and brush process
- 7- Disinfectant; Semi-automatic process

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

- 1- 0.027429
- 2- 2.743
- 3- 13.714
- 4- 2.743
- 5- 2.743
- 6- 2.743
- 7- 13.714

Inhalation exposure (mg/m³) :

- 1- 0.128472
- 2- 3.854
- 3- 4.111
- 4- 1.285
- 5- 1.285
- 6- 3.854
- 7- 4.111

Combined routes (mg/kg bw/day):

- 1- 0.04572
- 2- 3.293
- 3- 14.302
- 4- 2.926
- 5- 2.926
- 6- 3.293
- 7- 14.302

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):

- 1- Defoaming product; Automatic Process
- 2- Food process cleaner; Semi closed cleaning process
- 3- Food process cleaner; Cleaning In Place (CIP) process

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day): 1.371

Inhalation exposure (mg/m³) :

- 1- 0.2325
- 2- 0.642361
- 3- 0.642361

Combined routes (mg/kg bw/day):

- 1- 1.405
- 2- 1.463
- 3- 1.463

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
	Sub-scenario(s): 1- Animal housing care; Semi-Automatic process 2- Disinfectant; Semi-automatic process
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 27.429 Inhalation exposure (mg/m ³) : 1- 123.333 2- 61.667 Combined routes (mg/kg bw/day): 1- 45.048 2- 36.238

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³) : 123.333 Combined routes (mg/kg bw/day): 31.333

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 79 - Industrial use of Laundry products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Industrial use of Laundry products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC08b
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC35
Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**
Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b

Number of the ES	: 79
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-P101.1, AISE-P104.2, AISE-P101.2, AISE-P104.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Further specification	: Specific Environmental Release Category: AISE SPERC Code 4.1.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 100% Release fraction to surface water from process. 0% Release fraction to soil from process. 1.1% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068	ES 79 - Industrial use of Laundry products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure	
Frequency and duration of use	: Duration of activity: 5 min/day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Frequency and duration of use	: Duration of activity: 15 min/day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 15 - 60 minutes.

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.048845 Freshwater sediments (mg/kg d.w.) : 0.178662 Marine water (mg/l) : 0.005 Marine water sediments (mg/kg d.w.) : 0.01829 Agricultural soil (mg/kg dwt): 0.009182 Grassland (mg/kg dwt): 0.00861 Sewage Treatment Plant (mg/l) : 0.44482
Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m³) : 0.128472 Combined routes (mg/kg bw/day): 1.39

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 1.927 Combined routes (mg/kg bw/day): 1.647

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 80 - Industrial use of Laundry products (Reactive) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial use of Laundry products (reactive) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC08b
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06b
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC06b: Industrial use of reactive processing aids - ERC06b**

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b

Number of the ES	: 12880
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-P107.1, AISE-P107.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06b: Industrial use of reactive processing aids	
Amounts used	: 30 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0.1% Release fraction to air from process. 5% Release fraction to surface water from process. 0.025% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use : Duration of activity: 5 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity: 15 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 15 - 60 minutes.

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC06b: Industrial use of reactive processing aids

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.071086
 Freshwater sediments (mg/kg d.w.) : 0.260014
 Marine water (mg/l) : 0.007224
 Marine water sediments (mg/kg d.w.) : 0.026425
 Agricultural soil (mg/kg dwt): 0.009488
 Grassland (mg/kg dwt): 0.008631
 Sewage Treatment Plant (mg/l) : 0.667229

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 0.128472
 Combined routes (mg/kg bw/day): 1.39

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 1.927
 Combined routes (mg/kg bw/day): 1.647

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 81 - Industrial use of Laundry products (WDU) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial use of Laundry products - Wide Dispersive Use (WDU) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC08b
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b

Number of the ES	: 81
Industry Association	: AISE
Processes and activities covered by the exposure scenario	: Wide Dispersive Use (WDU)
Additional information	: Site 1 + 2 AISE-P110.1, AISE-P110.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure	
Frequency and duration of use	: Duration of activity: 5 min/day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Frequency and duration of use	: Duration of activity: 15 min/day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 15 - 60 minutes.

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
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Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :: Freshwater (mg/l) 0.004546 Freshwater sediments (mg/kg d.w.) : 0.016627 Marine water (mg/l) : 0.00057 Marine water sediments (mg/kg d.w.) : 0.002086 Agricultural soil (mg/kg dwt): 0.0008573 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m³) : 0.128472 Combined routes (mg/kg bw/day): 1.39

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 1.371 Inhalation exposure (mg/m ³) : 1.927 Combined routes (mg/kg bw/day): 1.647

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 82 - Industrial use of Quality Control - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial use of Quality control - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC15
Substance supplied to that use in form of: As such, In a mixture
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC21

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC15: Use as laboratory reagent - PROC15**

Number of the ES	: 82
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-P1250

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Further specification : Specific Environmental Release Category: AISE SPERC Code 4.1.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
1.1% Fraction used at main source.
100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Frequency and duration of use : Duration of activity: 15 min/day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.048845
 Freshwater sediments (mg/kg d.w.) : 0.178662
 Marine water (mg/l) : 0.005
 Marine water sediments (mg/kg d.w.) : 0.01829
 Agricultural soil (mg/kg dwt): 0.009182
 Grassland (mg/kg dwt): 0.00861
 Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.034286
 Inhalation exposure (mg/m³) : 0.192708
 Combined routes (mg/kg bw/day): 0.061815

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 83 - Industrial use of Vehicle cleaning Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial use of Vehicle cleaning Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC04, PROC07, PROC08a, PROC10
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04**
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10

Number of the ES	: 83
Industry Association	: AISE
Additional information	: Site 1 + 2
	AISE-P710.2, AISE-P712.1, AISE-P708.2, AISE-P713.1, AISE-P709.1, AISE-P709.2, AISE-P713.2, AISE-P707.1, AISE-P712.2, AISE-P714.2, AISE-P710.1, AISE-P708.1, AISE-P707.2, AISE-P714.1, AISE-P711.1, AISE-P711.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Further specification : Specific Environmental Release Category:
AISE SPERC Code 4.1.v1

Amounts used : 1,000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate 18000 m3/d.

Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 0%
Release fraction to water from process: 100%
Release fraction to soil from process: 0%
Fraction used at main source: 1.1%
Fraction tonnage to region: 100%

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Date of issue/Date of revision : ^(ES Revision date)

395/934

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**Further specification** : - Sub-scenario(s):

- 1- Aeroplane cleaner; Semi-automatic process - Outdoor
- 2- Car wash product; Semi-automatic process - Indoor
- 3- Dewaxing product; Semi-automatic process - Indoor
- 4- Train cleaner; Semi-automatic process - Indoor
- 5- Dewaxing product; Semi-automatic process - Outdoor
- 6- Aeroplane cleaner; Semi-automatic process - Indoor
- 7- Car wash product; Semi-automatic process - Outdoor
- 8- Train cleaner; Semi-automatic process - Outdoor

Product characteristics : Substance in preparation (Inhalation): 20%**Frequency and duration of use** : Duration of activity: 480 min/day**Other given operational conditions affecting workers exposure** : Sub-scenario(s) 1; 5; 7; 8:
Work is carried out outdoorsSub-scenario(s) 2; 3; 4; 6:
Work is carried out indoors**Conditions and measures related to personal protection and hygiene****Personal protection** : Wear protective gloves: 80% ; permeation breakthrough time of: > 4 hour(s)**Contributing scenario controlling worker exposure for: PROC07: Industrial spraying****Further specification** : - Sub-scenario(s):

- 1- Car wash product; Spray and rinse process - Indoor
- 2- Boat cleaner; Spray and Wipe Manual process
- 3- Car wash product; Spray and Wipe Manual process
- 4- Car wash product; Spray and rinse process - Outdoor

Product characteristics : Substance in preparation (Inhalation): 20%**Frequency and duration of use** : Duration of activity: 480 min/day**Other given operational conditions affecting workers exposure** : - Sub-scenario(s) 1:
Work is carried out indoors
- Sub-scenario(s) 2; 3; 4:
Work is carried out outdoors**Conditions and measures related to personal protection and hygiene****Personal protection** : Wear protective gloves: 80% ; permeation breakthrough time of: > 4 hour(s)**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities****Further specification** : - Sub-scenario(s):

- 1- Dewaxing product; Semi-automatic process - Outdoor
- 2- Boat cleaner; Manual process
- 3- Car wash product; Semi-automatic process - Indoor
- 4- Train cleaner; Semi-automatic process - Outdoor
- 5- Car wash product; Spray and rinse process - Indoor
- 6- Aeroplane cleaner; Semi-automatic process - Outdoor
- 7- Dewaxing product; Semi-automatic process - Indoor
- 8- Car wash product; Spray and rinse process - Outdoor
- 9- Aeroplane cleaner; Semi-automatic process - Indoor
- 10- Boat cleaner; Spray and Wipe Manual process
- 11- Train cleaner; Semi-automatic process - Indoor
- 12- Car wash product; Spray and Wipe Manual process
- 13- Car wash product; Semi-automatic process - Outdoor

Product characteristics : Substance in preparation (Inhalation): 20%

Frequency and duration of use	: Duration of activity: 30 min/day
Other given operational conditions affecting workers exposure	: Sub-scenario(s) 1; 2; 4; 6; 8; 10; 12; 13: Work is carried out outdoors Sub-scenario(s) 3; 5; 7; 9; 11: Work is carried out indoors
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80% ; permeation breakthrough time of: 15 - 60 minutes

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing	
Further specification	: Boat cleaner; Manual process
Product characteristics	: Substance in preparation (Inhalation): 20%
Frequency and duration of use	: Duration of activity: 480 min/day
Other given operational conditions affecting workers exposure	: Work is carried out outdoors
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80% ; permeation breakthrough time of: > 4 hour(s)

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
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Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :: Freshwater (mg/l) 0.048845 Freshwater sediments (mg/kg d.w.) : 0.178662 Marine water (mg/l) : 0.005 Marine water sediments (mg/kg d.w.) : 0.01829 Agricultural soil (mg/kg dwt): 0.009182 Grassland (mg/kg dwt): 0.00861 Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic - <u>Sub-scenario(s)</u> : 1- Aeroplane cleaner; Semi-automatic process - Outdoor 2- Car wash product; Semi-automatic process - Indoor 3- Dewaxing product; Semi-automatic process - Indoor 4- Train cleaner; Semi-automatic process - Indoor 5- Dewaxing product; Semi-automatic process - Outdoor 6- Aeroplane cleaner; Semi-automatic process - Indoor 7- Car wash product; Semi-automatic process - Outdoor 8- Train cleaner; Semi-automatic process - Outdoor

Exposure estimation : Dermal exposure
Exposure concentration (mg/kg bw/day): 1.371

Inhalation exposure
Exposure concentration (mg/m³):
- Sub-scenario(s) 1; 5; 7; 8: 43.167
- Sub-scenario(s) 2; 3; 4; 6: 61.667

Combined routes
Exposure concentration (mg/kg bw/day):
- Sub-scenario(s) 1; 5; 7; 8: 7.538
- Sub-scenario(s) 2; 3; 4; 6: 10.181

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

- Sub-scenario(s):

- 1- Car wash product; Spray and rinse process - Indoor
- 2- Boat cleaner; Spray and Wipe Manual process
- 3- Car wash product; Spray and Wipe Manual process
- 4- Car wash product; Spray and rinse process - Outdoor

Exposure estimation : Dermal exposure
Exposure concentration (mg/kg bw/day): 8.571

Inhalation exposure
Exposure concentration (mg/m³):
- Sub-scenario(s) 1: 246.667
- Sub-scenario(s) 2; 3; 4: 172.667

Combined routes
Exposure concentration (mg/kg bw/day):
- Sub-scenario(s) 1: 43.81
- Sub-scenario(s) 2; 3; 4: 33.238

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

- Sub-scenario(s):

- 1- Dewaxing product; Semi-automatic process - Outdoor
- 2- Boat cleaner; Manual process
- 3- Car wash product; Semi-automatic process - Indoor
- 4- Train cleaner; Semi-automatic process - Outdoor
- 5- Car wash product; Spray and rinse process - Indoor
- 6- Aeroplane cleaner; Semi-automatic process - Outdoor
- 7- Dewaxing product; Semi-automatic process - Indoor
- 8- Car wash product; Spray and rinse process - Outdoor
- 9- Aeroplane cleaner; Semi-automatic process - Indoor
- 10- Boat cleaner; Spray and Wipe Manual process
- 11- Train cleaner; Semi-automatic process - Indoor
- 12- Car wash product; Spray and Wipe Manual process
- 13- Car wash product; Semi-automatic process - Outdoor

Exposure estimation : Dermal exposure
Exposure concentration (mg/kg bw/day): 2.743

Inhalation exposure
Exposure concentration (mg/m³):
- Sub-scenario(s) 1; 2; 4; 6; 8; 10; 12; 13: 5.396
- Sub-scenario(s) 3; 5; 7; 9; 11: 7.708

Combined routes
Exposure concentration (mg/kg bw/day):
- Sub-scenario(s) 1; 2; 4; 6; 8; 10; 12; 13: 3.514
- Sub-scenario(s) 3; 5; 7; 9; 11: 3.844

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 5.486
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 17.819

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 84 - Industrial use of Water treatment Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial use of Water treatment Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC04, PROC08a, PROC08b, PROC10, PROC17, PROC24
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC14, PC25, PC35, PC37

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC17: Lubrication at high energy conditions and in partly open process - PROC17
PROC24: High (mechanical) energy work-up of substances bound in materials and/or articles - PROC24

Number of the ES	: 84
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-P1005.1, AISE-P1010.2, AISE-P1005.2, AISE-P904.2, AISE-P1008.1, AISE-P1003.1b, AISE-P1011.1, AISE-P1007.1, AISE-P1006.1, AISEP1003.1a, AISE-P903.2, AISE-P1009.2, AISE-P1010.1, AISE-P1006.2, AISE-P905.1, AISE-P1004.2, AISE-P1002.1, AISE-P1011.2, AISEP1003.2a, AISE-P903.1, AISE-P1009.1, AISE-P1008.2, AISE-P1002.2, AISE-P905.2, AISE-P1007.2, AISE-P904.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Further specification : Specific Environmental Release Category:
AISE SPERC Code 4.1.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Date of issue/Date of revision : ^(ES Revision date)

400/934

Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 0% Release fraction to water from process: 100% Release fraction to soil from process: 0% Fraction used at main source: 1.1% Fraction tonnage to region: 100%
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: - <u>Sub-scenario(s)</u> : 1- Metal cleaner (Degreasers, Descalers...); Automatic Process 2- Coating product (Paint, Filler, Putty, Thinner); Automatic Process
Frequency and duration of use	: Duration of activity: 480 min/day
Other given operational conditions affecting workers exposure	: Work is carried out indoors
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80% ; permeation breakthrough time of: > 4 hour(s)

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification	: - <u>Sub-scenario(s)</u> : 1- Surface finishing product; Manual with no process water recycling process 2- Metal cleaner (Degreasers, Descalers...); Semi-automatic process 3- Preservation and sanitation agent; Drink and pool water 4- Preservation and sanitation agent; Process water 5- Surface finishing product; Manual with water recycling process 6- Coating product (Paint, Filler, Putty, Thinner); Semi-automatic process 7- Sanitation agent; Waste water
Frequency and duration of use	: Duration of activity: 480 min/day
Other given operational conditions affecting workers exposure	: - Sub-scenario(s) 1; 2; 5; 6: Work is carried out indoors - Sub-scenario(s) 3; 4; 7: Work is carried out outdoors
Technical conditions and measures to control dispersion from source towards the worker	: Sub-scenario(s) 1; 2; 5; 6: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	

Personal protection : Sub-scenario(s) 1; 2; 5; 6 : Wear protective gloves: 80% ; permeation breakthrough time of: > 4 hour(s)

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : - Sub-scenario(s):

- 1- Coating product (Paint, Filler, Putty, Thinner); Semi-automatic process
- 2- Surface finishing product; Manual with water recycling process
- 3- Surface finishing product; Manual with no process water recycling process
- 4- Sanitation agent; Waste water
- 5- Coating product (Paint, Filler, Putty, Thinner); Manual process

Frequency and duration of use : Duration of activity:
- Sub-scenario(s) 1; 5: 60 min/day
- Sub-scenario(s) 2; 3; 4: 10 min/day

Other given operational conditions affecting workers exposure : - Sub-scenario(s) 1; 2; 3; 5:
Work is carried out indoors
- Sub-scenario(s) 4:
Work is carried out outdoors

Technical conditions and measures to control dispersion from source towards the worker : - Sub-scenario(s) 1; 2; 3; 5:
Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Chemical resistant protective gloves: 80%
- Sub-scenario(s) 1; 5:
permeation breakthrough time of: 1 - 4 hour(s)
- Sub-scenario(s) 2; 3; 4:
permeation breakthrough time of: < 15 minutes

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : - Sub-scenario(s):

- 1- Metal cleaner (Degreasers, Descalers...); Semi-automatic process
- 2- Hot metal working fluid; Automatic Process
- 3- Coating product (Paint, Filler, Putty, Thinner); Automatic Process
- 4- Metal cleaner (Degreasers, Descalers...); Automatic Process
- 5- Hot metal working fluid; Automatic Process
- 6- Metal working Fluids (rolling oils, lubricants); Automatic Process
- 7- Preservation and sanitation agent; Process water
- 8- Preservation and sanitation agent; Drink and pool water

Frequency and duration of use : Duration of activity:
- Sub-scenario(s) 1; 4; 6: 15 min/day
- Sub-scenario(s) 2; 3; 5: 60 min/day
- Sub-scenario(s) 7; 8: 10 min/day

Other given operational conditions affecting workers exposure : - Sub-scenario(s) 1; 2; 3; 4; 5; 6:
Work is carried out indoors
- Sub-scenario(s) 7; 8:
Work is carried out outdoors

Technical conditions and measures to control dispersion from source towards the worker : - Sub-scenario(s) 1; 2; 3; 4; 5; 6:
Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Chemical resistant protective gloves: 80%

- Sub-scenario(s) 1; 4; 6:
permeation breakthrough time of: 15 minutes - 1 hour(s)
- Sub-scenario(s) 2; 3; 5:
permeation breakthrough time of: 1 - 4 hour(s)
- Sub-scenario(s) 7; 8:
permeation breakthrough time of: < 15 minutes

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further specification : - Sub-scenario(s):

- 1- Coating product (Paint, Filler, Putty, Thinner); Manual process
- 2- Metal cleaner (Degreasers, Descalers...); Manual process

Frequency and duration of use : Duration of activity: 480 min/day

Other given operational conditions affecting workers exposure : Work is carried out indoors

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Chemical resistant protective gloves: 80%
permeation breakthrough time of: > 4 hour(s)

Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process

Further specification : Metal working Fluids (rolling oils, lubricants); Automatic Process

Frequency and duration of use : Duration of activity: 480 min/day

Other given operational conditions affecting workers exposure : Work is carried out indoors

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Chemical resistant protective gloves: 80%
permeation breakthrough time of: > 4 hour(s)

Contributing scenario controlling worker exposure for: PROC24: High (mechanical) energy work-up of substances bound in materials and/or articles

Further specification : PROC 24A: Hot metal working fluid; Automatic Process

Frequency and duration of use : Duration of activity: 480 min/day

Other given operational conditions affecting workers exposure : Work is carried out indoors

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Chemical resistant protective gloves: 80%
permeation breakthrough time of: > 4 hour(s)

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration ::
Freshwater (mg/l) 0.048845
Freshwater sediments (mg/kg d.w.) : 0.178662
Marine water (mg/l) : 0.005
Marine water sediments (mg/kg d.w.) : 0.01829
Agricultural soil (mg/kg dwt): 0.009182
Grassland (mg/kg dwt): 0.00861
Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 1.233
Combined routes (mg/kg bw/day): 0.203619

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

- Sub-scenario(s):

- 1- Surface finishing product; Manual with no process water recycling process
- 2- Metal cleaner (Degreasers, Descalers...); Semi-automatic process
- 3- Preservation and sanitation agent; Drink and pool water
- 4- Preservation and sanitation agent; Process water
- 5- Surface finishing product; Manual with water recycling process
- 6- Coating product (Paint, Filler, Putty, Thinner); Semi-automatic process
- 7- Sanitation agent; Waste water

Exposure estimation : Dermal exposure
Exposure concentration (mg/kg bw/day):
- Sub-scenario(s) 1; 2; 5; 6: 0.137143
- Sub-scenario(s) 3; 4; 7: 6.857

Inhalation exposure

Exposure concentration (mg/m³):
- Sub-scenario(s) 1; 2; 5; 6: 6.167
- Sub-scenario(s) 3; 4; 7: 43.167

Combined routes

Exposure concentration (mg/kg bw/day):
- Sub-scenario(s) 1; 2; 5; 6: 1.018
- Sub-scenario(s) 3; 4; 7: 13.024

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

- Sub-scenario(s):

- 1- Coating product (Paint, Filler, Putty, Thinner); Semi-automatic process
- 2- Surface finishing product; Manual with water recycling process
- 3- Surface finishing product; Manual with no process water recycling process
- 4- Sanitation agent; Waste water
- 5- Coating product (Paint, Filler, Putty, Thinner); Manual process

Exposure estimation

: Dermal exposure

Exposure concentration (mg/kg bw/day):

- Sub-scenario(s) 1; 2; 3; 5: 0.027429
- Sub-scenario(s) 4: 2.743

Inhalation exposure

Exposure concentration (mg/m³):

- Sub-scenario(s) 1; 5: 1.542
- Sub-scenario(s) 2; 3: 0.256944
- Sub-scenario(s) 4: 1.799

Combined routes

Exposure concentration (mg/kg bw/day):

- Sub-scenario(s) 1; 5: 0.247667
- Sub-scenario(s) 2; 3: 0.064135
- Sub-scenario(s) 4: 3

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

- Sub-scenario(s):

- 1- Metal cleaner (Degreasers, Descalers...); Semi-automatic process
- 2- Hot metal working fluid; Automatic Process
- 3- Coating product (Paint, Filler, Putty, Thinner); Automatic Process
- 4- Metal cleaner (Degreasers, Descalers...); Automatic Process
- 5- Hot metal working fluid; Automatic Process
- 6- Metal working Fluids (rolling oils, lubricants); Automatic Process
- 7- Preservation and sanitation agent; Process water
- 8- Preservation and sanitation agent; Drink and pool water

Exposure estimation

: Dermal exposure

Exposure concentration (mg/kg bw/day):

- Sub-scenario(s) 1; 2; 3; 4; 5; 6: 0.137143
- Sub-scenario(s) 7; 8: 1.371

Inhalation exposure

Exposure concentration (mg/m³):

- Sub-scenario(s) 1; 4; 6: 0.057812
- Sub-scenario(s) 2; 3; 5: 0.23125
- Sub-scenario(s) 7; 8: 0.899306

Combined routes

Exposure concentration (mg/kg bw/day):

- Sub-scenario(s) 1; 4; 6: 0.145402
- Sub-scenario(s) 2; 3; 5: 0.170179
- Sub-scenario(s) 7; 8: 1.5

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.274286
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 2.036

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.274286
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 2.036

Exposure estimation and reference to its source - Workers: PROC24: High (mechanical) energy work-up of substances bound in materials and/or articles

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.056571
Inhalation exposure (mg/m³) : Not applicable.
Combined routes (mg/kg bw/day): 0.056571

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 85 - Industrial use of formulated lubricants in closed and open systems - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial use of formulated lubricants in closed and open systems - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC17, PROC18
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC17: Lubrication at high energy conditions and in partly open process - PROC17
PROC18: Greasing at high energy conditions - PROC18

Number of the ES	: 85
Processes and activities covered by the exposure scenario	: including transfer operations, operation of engines and similar articles, maintenance and disposal of waste oil
Additional information	: Site 1 + 2 CONCAWE6A.5, CONCAWE6A.9, CONCAWE6A.11, CONCAWE6A.10, CONCAWE6A.6, CONCAWE6A.7, CONCAWE6A.4, CONCAWE6A.12, CONCAWE6A.8, CONCAWE6A.2, CONCAWE6A.1, CONCAWE6A.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 4.6a.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: 0.003% Release fraction to air from process. 0.1% Release fraction to surface water from process. 0.1% Release fraction to soil from process. 10% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity: >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity: >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity: >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process**

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC18: Greasing at high energy conditions**

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.008811
- Freshwater sediments (mg/kg d.w.) : 0.032229
- Marine water (mg/l) : 0.000997
- Marine water sediments (mg/kg d.w.) : 0.003646
- Agricultural soil (mg/kg dwt): 0.008632
- Grassland (mg/kg dwt): 0.008575
- Sewage Treatment Plant (mg/l) : 0.044482

Date of issue/Date of revision : ^ (ES Revision date)

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Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 246.667
Combined routes (mg/kg bw/day): 78.095

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 45.048

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 246.667
Combined routes (mg/kg bw/day): 62.667

Exposure estimation and reference to its source - Workers: PROC18: Greasing at high energy conditions

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 246.667
Combined routes (mg/kg bw/day): 48.952

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

SILIPON RN6068

ES 85 - Industrial use of formulated lubricants in closed and open systems - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 86 - Industrial use of fuel additives and additised fuels - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial use of fuel additives and additised fuels - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC16
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC07
Market sector by type of chemical product: PC13

Environmental contributing scenarios : **ERC07: Industrial use of substances in closed systems - ERC07**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC16: Using material as fuel sources, limited exposure to unburned product to be expected - PROC16

Number of the ES	: 134
Industry Association	: ATC-Group
Additional information	: Site 1 + 2
	ATC-Group_KI.1, ATC-Group_KI.4, ATC-Group_KI.3, ATCGroup_KI.5, ATC-Group_KI.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC07: Industrial use of substances in closed systems	
Amounts used	: 40 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate 18000 m ³ /d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 5% Release fraction to water from process: 5% Release fraction to soil from process: 5% Fraction used at main source: 100% Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at nondedicated facilities

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : - Sub-scenario(s):

- 1- Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
- 2- Maintenance activities. General exposure during maintenance work including draining, refilling and testing
- 3- Disposal of waste product & used containers

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC16: Using material as fuel sources, limited exposure to unburned product to be expected

Further specification : Use as fuel for heating or power

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC07: Industrial use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.093327
- Freshwater sediments (mg/kg d.w.) : 0.341366
- Marine water (mg/l) : 0.009448
- Marine water sediments (mg/kg d.w.) : 0.03456
- Agricultural soil (mg/kg dwt): 0.009824
- Grassland (mg/kg dwt): 0.008709
- Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC16: Using material as fuel sources, limited exposure to unburned product to be expected

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 2.105

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 87 - Industrial use of non-volatile substances in Construction Chemicals - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Industrial use of non-volatile substances in Construction Chemicals - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC07, PROC08b, PROC10, PROC13, PROC14
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix** - ERC05

Health Contributing scenarios : **PROC07: Industrial spraying** - PROC07
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14

Number of the ES	: 87
Industry Association	: EFCC
Additional information	: Site 1 + 2
	EFCC (Bauchemie)-I3.3, EFCC (Bauchemie)-I3.4, EFCC (Bauchemie)-I3.2, EFCC (Bauchemie)-I3.1, EFCC (Bauchemie)-I3.5, EFCC 6

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix

Further specification : Specific Environmental Release Category: EFCC SPERC Code 5.1a.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 1.7% Release fraction to air from process.
0% Release fraction to surface water from process.
0% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

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Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity >4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Respiratory protection : Wear respiratory protection: 95%

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity: 240 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity >4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Frequency and duration of use : Duration of activity >4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008989
Grassland (mg/kg dwt): 0.009354
Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 8.571
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 17.381

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 30.833
Combined routes (mg/kg bw/day): 5.776

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 5.486
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 23.105

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 20.362

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.685714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.495

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 88 - Manufacture of rubber articles - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Manufacture of rubber articles - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC06, PROC07, PROC08a, PROC08b, PROC09, PROC13, PROC14, PROC15, PROC21
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC06: Calendering operations - PROC06
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC15: Use as laboratory reagent - PROC15
PROC21: Low energy manipulation of substances bound in materials and/or articles - PROC21

Number of the ES	: 88
Industry Association	: ConcaWE
Processes and activities covered by the exposure scenario	: including processing of raw rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing
Additional information	: Site 1 + 2 CONCAWE19.7, CONCAWE19.9, CONCAWE19.13, CONCAWE19.1, CONCAWE19.8, CONCAWE19.3, CONCAWE19.4, CONCAWE19.10, CONCAWE19.11, CONCAWE19.5, CONCAWE19.12, CONCAWE19.6, CONCAWE19.2, CONCAWE19.14

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 4.19.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 300
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 1% Release fraction to air from process. 1% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)**

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC06: Calendering operations**

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC07: Industrial spraying**

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC21: Low energy manipulation of substances bound in materials and/or articles

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.034018
 Freshwater sediments (mg/kg d.w.) : 0.124428
 Marine water (mg/l) : 0.003518
 Marine water sediments (mg/kg d.w.) : 0.012866
 Agricultural soil (mg/kg dwt): 0.009132
 Grassland (mg/kg dwt): 0.008893
 Sewage Treatment Plant (mg/l) : 0.296546

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC06: Calendering operations

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 36.238

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 246.667
Combined routes (mg/kg bw/day): 78.095

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Exposure estimation and reference to its source - Workers: PROC21: Low energy manipulation of substances bound in materials and/or articles

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.829
Inhalation exposure (mg/m³) : Not applicable.
Combined routes (mg/kg bw/day): 2.829

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 89 - Manufacturing / Formulation of Fertilizers - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Manufacturing/Formulation of Fertilisers. - Industrial - Sulfuric acid, mono-C12-18-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC05, PROC08b, PROC09, PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC12, PC19

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 89
Additional information	: Site 1 + 2
	Fe2.1.3, Fe2.1.1, Fe3.1.1, Fe2.5.1, Fe2.5.2, Fe2.1.2, Fe2.6, Fe3.4, Fe2.2, Fe3.3, Fe2.3, Fe2.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Amounts used	: 500 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 2.5% Release fraction to water from process: 2% Release fraction to soil from process: 0.01% Fraction used at main source: 100% Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day):: 2000000

Date of issue/Date of revision : ^(ES Revision date)

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Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Manufacturing of mineral fertilizers, including maintenance or cleaning (Intermediates): Manufacturing of solid or liquid mineral fertilizers

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Manufacturing of mineral fertilizers, including maintenance or cleaning (Intermediates): Adding micronutrients and/or additives (anti-caking, fillers, coatings, colouring agent...) in solid or liquid fertilizers

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Manufacturing of mineral fertilizers, including maintenance or cleaning: Adding micronutrients and/or additives (anti-caking, fillers, coatings, colouring agent...) in solid or liquid fertilizers

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Transfer loading/unloading of liquid and solid fertilizers: Loading / unloading

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Transfer loading/unloading of liquid and solid fertilizers: Loading / unloading

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**Further specification** : Seed treatment: Treating or coating of seed with Fertilizer**Frequency and duration of use** : Duration of activity: > 4 hour(s)**Other given operational conditions affecting workers exposure** : Indoor**Conditions and measures related to personal protection and hygiene****Section 3 - Exposure estimation and reference to its source****Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009985
Grassland (mg/kg dwt): 0.00902
Sewage Treatment Plant (mg/l) : 0.889639**Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133**Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 90 - Manufacturing / Formulation of Fertilizers (Intermediates) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Manufacturing/Formulation of Fertilisers. (Intermediates) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC03, PROC05
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06a
Market sector by type of chemical product: PC12, PC19

Environmental contributing scenarios : **ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates) - ERC06a**

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05

Number of the ES	: 90
Additional information	: Site 1 + 2 Fe3.2, Fe3.1.2, Fe3.1.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)	
Amounts used	: 107 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 5% Release fraction to water from process: 2% Release fraction to soil from process: 0.1% Fraction used at main source: 100% Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Manufacturing of mineral fertilizers, including maintenance or cleaning (Intermediates): Adding micronutrients and/or additives (anti-caking, fillers, coatings, colouring agent...) in solid or liquid fertilizers

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : - Blending and filling processes (closed / dedicated). Includes both bulk and small quantity additions

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Manufacturing of mineral fertilizers, including maintenance or cleaning: Adding micronutrients and/or additives (anti-caking, fillers, coatings, colouring agent...) in solid or liquid fertilizers

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.099554
Freshwater sediments (mg/kg d.w.) : 0.364145
Marine water (mg/l) : 0.010071
Marine water sediments (mg/kg d.w.) : 0.036838
Agricultural soil (mg/kg dwt): 0.009961
Grassland (mg/kg dwt): 0.008813
Sewage Treatment Plant (mg/l) : 0.951914

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 91 - Mixing - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Mixing - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06d
Market sector by type of chemical product: PC32

Environmental contributing scenarios : **ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers - ERC06d**

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05**

Number of the ES : 91
Additional information : Site 1 + 2

TEGEWA-T15.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 100

Environment factors not influenced by risk management : River flow rate: 18000 m3/d.

Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 35%
Release fraction to water from process: 0.005%
Release fraction to soil from process: 0.025%
Fraction used at main source: 100%
Fraction tonnage to region: 100%

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity: 60 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: 1-4 hour(s)

Respiratory protection : Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004808
 Freshwater sediments (mg/kg d.w.) : 0.017586
 Marine water (mg/l) : 0.000597
 Marine water sediments (mg/kg d.w.) : 0.002182
 Agricultural soil (mg/kg dwt): 0.013952
 Grassland (mg/kg dwt): 0.001894
 Sewage Treatment Plant (mg/l) : 0.004448

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 0.770833
 Combined routes (mg/kg bw/day): 2.853

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 92 - Non-Volatile substances for the Formulation of Construction Chemicals - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Non-Volatile substances for the Formulation of Construction Chemicals - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC03, PROC05, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC03: Use in closed batch process (synthesis or formulation)** - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES	: 141
Industry Association	: EFCC
Additional information	: Site 1 + 2 EFCC (Bauchemie)-F3.3, EFCC (Bauchemie)-F3.4, EFCC (Bauchemie)-F3.5, EFCC (Bauchemie)-F3.2, EFCC (Bauchemie)-F3.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*	
Further specification	: Specific Environmental Release Category: EFCC SPERC Code 2.1c.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

437/934

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Frequency and duration of use : Duration of activity > 4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Sub-scenario(s):
1- with local exhaust ventilation.
2- Without LEV.

Frequency and duration of use : Duration of activity > 4 hours per day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s):
1- with local exhaust ventilation.
2- Without LEV.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity: 240 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity: 240 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.024582
Freshwater sediments (mg/kg d.w.) : 0.089915
Marine water (mg/l) : 0.002574
Marine water sediments (mg/kg d.w.) : 0.009415
Agricultural soil (mg/kg dwt): 0.008849
Grassland (mg/kg dwt): 0.008589
Sewage Treatment Plant (mg/l) : 0.202191

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [with local exhaust ventilation; Without LEV]
Dermal exposure (mg/kg bw/day): [0.013714; 2.743]
Inhalation exposure (mg/m³) : [6.167; 61.667]
Combined routes (mg/kg bw/day): [0.894667; 11.552]

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 30.833
Combined routes (mg/kg bw/day): 5.776

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 30.833
Combined routes (mg/kg bw/day): 5.776

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

SILIPON RN6068

***ES 92 - Non-Volatile substances for the Formulation of
Construction Chemicals - Industrial - Sulfuric acid,
mono-C12-14-alkyl esters, sodium salts***

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 93 - Processing of formulated polymers - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Processing of formulated polymers - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC13, PROC14, PROC21
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC06: Calendering operations - PROC06
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC21: Low energy manipulation of substances bound in materials and/or articles - PROC21

Number of the ES	: 93
Processes and activities covered by the exposure scenario	: Processing of formulated polymers including material transfers, additives handling, moulding, curing and forming activities, material re-works, storage and associated maintenance.
Additional information	: Site 1 + 2 CONCAWE23A.10, CONCAWE23A.6, CONCAWE23A.7, CONCAWE23A.4, CONCAWE23A.5, CONCAWE23A.3, CONCAWE23A.2, CONCAWE23A.9, CONCAWE23A.1, CONCAWE23A.11, CONCAWE23A.12, CONCAWE23A.8

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 4.21a.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 300
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: 2% Release fraction to air from process. 0% Release fraction to surface water from process. 0.001% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC06: Calendering operations

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC21: Low energy manipulation of substances bound in materials and/or articles

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.015959
 Marine water (mg/l) : 0.0000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.00889
 Grassland (mg/kg dwt): 0.009164
 Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC06: Calendering operations

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 36.238

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Exposure estimation and reference to its source - Workers: PROC21: Low energy manipulation of substances bound in materials and/or articles

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.829
Inhalation exposure (mg/m³) : Not applicable.
Combined routes (mg/kg bw/day): 2.829

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 94 - Spraying (Non-Reactive) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Spraying (non-reactive) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC07
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC20, PC34
Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**
Health Contributing scenarios : **PROC07: Industrial spraying - PROC07**

Number of the ES	: 94
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-T21.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Amounts used	: 1 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 100% Release fraction to air from process. 100% Release fraction to surface water from process. 5% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity: >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.048845
 Freshwater sediments (mg/kg d.w.) : 0.178662
 Marine water (mg/l) : 0.005
 Marine water sediments (mg/kg d.w.) : 0.01829
 Agricultural soil (mg/kg dwt): 0.009197
 Grassland (mg/kg dwt): 0.00864
 Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 0.428571
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 9.238

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 95 - Spraying (Reactive) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Spraying (reactive) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC07
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC32, PC34
Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix** - ERC05
Health Contributing scenarios : **PROC07: Industrial spraying** - PROC07

Number of the ES : 95
Industry Association : TEGEWA
Additional information : Site 1 + 2
TEGEWA-T22.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC05: Industrial use resulting in inclusion into or onto a matrix**
Further specification : Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used : 400 Tonnes/year
Frequency and duration of use : Release times per year: 220
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
5% Release fraction to surface water from process.
0% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity: >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.085239
 Freshwater sediments (mg/kg d.w.) : 0.311784
 Marine water (mg/l) : 0.00864
 Marine water sediments (mg/kg d.w.) : 0.031602
 Agricultural soil (mg/kg dwt): 0.009682
 Grassland (mg/kg dwt): 0.008642
 Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 0.428571
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 9.238

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 96 - Textile coating (Inclusion into Matrix) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Textile Coating (Inclusion in Matrix) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC10
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC20, PC34
Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix - ERC05**
Health Contributing scenarios : **PROC10: Roller application or brushing - PROC10**

Number of the ES	: 96
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-T11.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity: >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.085239
Freshwater sediments (mg/kg d.w.) : 0.311784
Marine water (mg/l) : 0.00864
Marine water sediments (mg/kg d.w.) : 0.031602
Agricultural soil (mg/kg dwt): 0.009682
Grassland (mg/kg dwt): 0.008642
Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 0.274286
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 2.036

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 97 - Textile coating (Non-Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Textile Coating (Non-Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC10
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC20, PC34
Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**
Health Contributing scenarios : **PROC10: Roller application or brushing - PROC10**

Number of the ES	: 97
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-T10.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Amounts used	: 1 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 100% Release fraction to air from process. 100% Release fraction to surface water from process. 5% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity: >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.048845
Freshwater sediments (mg/kg d.w.) : 0.178662
Marine water (mg/l) : 0.005
Marine water sediments (mg/kg d.w.) : 0.01829
Agricultural soil (mg/kg dwt): 0.009197
Grassland (mg/kg dwt): 0.00864
Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 0.274286
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 2.036

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 98 - Textile coating (Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Textile Coating (Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC10
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06b
Market sector by type of chemical product: PC20, PC34
Environmental contributing scenarios : **ERC06b: Industrial use of reactive processing aids - ERC06b**
Health Contributing scenarios : **PROC10: Roller application or brushing - PROC10**

Number of the ES	: 98
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-T12.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06b: Industrial use of reactive processing aids	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 6b.1.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 2% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity: >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06b: Industrial use of reactive processing aids

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.085239
Freshwater sediments (mg/kg d.w.) : 0.311784
Marine water (mg/l) : 0.00864
Marine water sediments (mg/kg d.w.) : 0.031602
Agricultural soil (mg/kg dwt): 0.009682
Grassland (mg/kg dwt): 0.008642
Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 0.274286
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 2.036

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
 Code : 00032069
 Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 99 - Textile application: dipping and pouring (Inclusion in Matrix) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Textile applications: dipping and pouring (Inclusion in Matrix) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC08, PC18, PC20, PC32, PC34

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix** - ERC05

Health Contributing scenarios : **PROC13: Treatment of articles by dipping and pouring** - PROC13

Number of the ES	: 99
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-T8.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix

Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m ³ /d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity: >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.085239
Freshwater sediments (mg/kg d.w.) : 0.311784
Marine water (mg/l) : 0.00864
Marine water sediments (mg/kg d.w.) : 0.031602
Agricultural soil (mg/kg dwt): 0.009682
Grassland (mg/kg dwt): 0.008642
Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 4.505

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 100 - Textile application: dipping and pouring (Non-Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Textile applications: dipping and pouring (Non-Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC20, PC34, PC35

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC13: Treatment of articles by dipping and pouring** - PROC13

Number of the ES	: 100
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-T7.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Amounts used	: 1 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 100% Release fraction to air from process. 100% Release fraction to surface water from process. 5% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity: >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.048845
Freshwater sediments (mg/kg d.w.) : 0.178662
Marine water (mg/l) : 0.005
Marine water sediments (mg/kg d.w.) : 0.01829
Agricultural soil (mg/kg dwt): 0.009197
Grassland (mg/kg dwt): 0.00864
Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 4.505

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 101 - Textile application: dipping and pouring (Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Textile applications: dipping and pouring (Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06b
Market sector by type of chemical product: PC34

Environmental contributing scenarios : **ERC06b: Industrial use of reactive processing aids** - ERC06b

Health Contributing scenarios : **PROC13: Treatment of articles by dipping and pouring** - PROC13

Number of the ES	: 101
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-T9.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06b: Industrial use of reactive processing aids	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 6b.1.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 2% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity: >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06b: Industrial use of reactive processing aids

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.085239
Freshwater sediments (mg/kg d.w.) : 0.311784
Marine water (mg/l) : 0.00864
Marine water sediments (mg/kg d.w.) : 0.031602
Agricultural soil (mg/kg dwt): 0.009682
Grassland (mg/kg dwt): 0.008642
Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 4.505

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 102 - Use as a blowing agent - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as a blowing agent - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC08b, PROC09, PROC12
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC12: Use of blowing agents in manufacture of foam - PROC12

Number of the ES	: 102
Industry Association	: Concauwe
Processes and activities covered by the exposure scenario	: Use as a blowing agent , including material transfers, curing, storage and maintenance.
Additional information	: Site 1+ 2 CONCAWE9.2, CONCAWE9.5, CONCAWE9.4, CONCAWE9.6, CONCAWE9.3, CONCAWE9.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 4.9.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 300
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 100% Release fraction to air from process. 0.1% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

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Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC12: Use of blowing agents in manufacture of foam

Further specification : Same for all PROC
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.
Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.007328
 Freshwater sediments (mg/kg d.w.) : 0.026806
 Marine water (mg/l) : 0.000849
 Marine water sediments (mg/kg d.w.) : 0.003104
 Agricultural soil (mg/kg dwt): 0.023969
 Grassland (mg/kg dwt): 0.038198
 Sewage Treatment Plant (mg/l) : 0.029655

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic
Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic
Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic
Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC12: Use of blowing agents in manufacture of foam

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 24.667
Combined routes (mg/kg bw/day): 3.867

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 103 - Use as a component of cleaning products for industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as a component of cleaning products for industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC07, PROC08a, PROC08b, PROC10, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 103
Industry Association	: ConcaWE
Processes and activities covered by the exposure scenario	: Includes transfer from storage; pouring/unloading from drums or containers; exposures during cleaning activities (automated and by hand); and related maintenance.
Additional information	: Site 1+ 2 CONCAWE4A.5, CONCAWE4A.7, CONCAWE4A.2, CONCAWE4A.6, CONCAWE4A.9, CONCAWE4A.8, CONCAWE4A.1, CONCAWE4A.3, CONCAWE4A.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 4.4a.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 20

Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 30% Release fraction to air from process. 0.01% Release fraction to surface water from process. 0% Release fraction to soil from process. 10% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC07: Industrial spraying**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.004808
	Freshwater sediments (mg/kg d.w.) : 0.017586
	Marine water (mg/l) : 0.000597
	Marine water sediments (mg/kg d.w.) : 0.002182
	Agricultural soil (mg/kg dwt): 0.009038
	Grassland (mg/kg dwt): 0.00946
	Sewage Treatment Plant (mg/l) : 0.004448

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 0.342857
	Inhalation exposure (mg/m ³) : 0.123333
	Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 1.371
	Inhalation exposure (mg/m ³) : 12.333
	Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 0.342857
	Inhalation exposure (mg/m ³) : 37
	Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 246.667
Combined routes (mg/kg bw/day): 78.095

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 45.048

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 103 - Use as a component of cleaning products for industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 104 - Use as a fuel including incineration of wastes and use as a solvent in fuel additives, covers refueling and evaporative losses - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as a fuel including incineration of wastes and use as a solvent in fuel additives - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC16
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC07

Environmental contributing scenarios : **ERC07: Industrial use of substances in closed systems** - ERC07

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC16: Using material as fuel sources, limited exposure to unburned product to be expected - PROC16

Number of the ES : 104

Industry Association : Concawe

Additional information : Site 1+ 2

CONCAWE12A.5, CONCAWE12A.6, CONCAWE12A.1, CONCAWE12A.2,
CONCAWE12A.3, CONCAWE12A.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC07: Industrial use of substances in closed systems**

Further specification : Specific Environmental Release Category: ESVOC 7.12a.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 300

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0.025% Release fraction to air from process.
0.001% Release fraction to surface water from process.
0% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068

ES 104 - Use as a fuel including incineration of wastes and use as a solvent in fuel additives, covers refueling and evaporative losses - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

SILIPON RN6068

ES 104 - Use as a fuel including incineration of wastes and use as a solvent in fuel additives, covers refueling and evaporative losses - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Contributing scenario controlling worker exposure for: PROC16: Using material as fuel sources, limited exposure to unburned product to be expected

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC07: Industrial use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004393
Freshwater sediments (mg/kg d.w.) : 0.016067
Marine water (mg/l) : 0.000555
Marine water sediments (mg/kg d.w.) : 0.00203
Agricultural soil (mg/kg dwt): 0.008575
Grassland (mg/kg dwt): 0.008578
Sewage Treatment Plant (mg/l) : 0.000297

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

SILIPON RN6068

ES 104 - Use as a fuel including incineration of wastes and use as a solvent in fuel additives, covers refueling and evaporative losses - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC16: Using material as fuel sources, limited exposure to unburned product to be expected

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 2.105

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 105 - Use as a fuel including use as a solvent in fuel additives; covers refueling and evaporative losses - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as a fuel including use as a solvent in fuel additives; covers refueling and evaporative losses - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC16
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09a

Environmental contributing scenarios : **ERC09a: Wide dispersive indoor use of substances in closed systems - ERC09a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC16: Using material as fuel sources, limited exposure to unburned product to be expected - PROC16

Number of the ES : 105

Industry Association : Concawe

Additional information : Site 1+ 2

CONCAWE12B.4, CONCAWE12B.3, CONCAWE12B.7, CONCAWE12B.1,
CONCAWE12B.2, CONCAWE12B.9, CONCAWE12B.10, CONCAWE12B.8,
CONCAWE12B.5, CONCAWE12B.12, CONCAWE12B.6, CONCAWE12B.11

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC09a: Wide dispersive indoor use of substances in closed systems**

Further specification : Specific Environmental Release Category: ESVOC 9.12b.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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ES 105 - Use as a fuel including use as a solvent in fuel additives; covers refueling and evaporative losses - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Other given operational conditions affecting environmental exposure

: 0.01% Release fraction to air from process.
0.001% Release fraction to surface water from process.
0.01% Release fraction to soil from process.
0.05% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil

: See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant

: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification

: Same for all PROC

Concentration of substance in mixture or article

: Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use

: Duration of activity >4 hours

Area of use:

: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification

: Same for all PROC

Concentration of substance in mixture or article

: Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use

: Duration of activity >4 hours

Area of use:

: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification

: Same for all PROC

Concentration of substance in mixture or article

: Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use

: Duration of activity >4 hours

Area of use:

: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

SILIPON RN6068 *ES 105 - Use as a fuel including use as a solvent in fuel additives; covers refueling and evaporative losses - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts*

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC16: Using material as fuel sources, limited exposure to unburned product to be expected

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09a: Wide dispersive indoor use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.
Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 1.22x10⁻⁸

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 0.123333
Outdoor- 0.086333
Combined routes (mg/kg bw/day):
Indoor- 0.360476
Outdoor- 0.35519

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 43.167
Combined routes (mg/kg bw/day):
Indoor- 10.181
Outdoor- 7.538

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 37
Outdoor- 25.9
Combined routes (mg/kg bw/day):
Indoor- 5.629
Outdoor- 4.043

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 13.714
Outdoor- 61.667
Combined routes (mg/kg bw/day):
Indoor- 22.524
Outdoor- 44.524

SILIPON RN6068

ES 105 - Use as a fuel including use as a solvent in fuel additives; covers refueling and evaporative losses - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC16: Using material as fuel sources, limited exposure to unburned product to be expected

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 12.333
Outdoor- 8.633
Combined routes (mg/kg bw/day):
Indoor- 2.105
Outdoor- 1.576

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 106 - Use as a isolated intermediate not under strictly controlled conditions - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as a isolated intermediate not under strictly controlled conditions - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06a

Environmental contributing scenarios : **ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)** - ERC06a

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 106
Industry Association	: ConcaWE
Additional information	: Site 1+ 2 CONCAWE1B.4, CONCAWE1B.7, CONCAWE1B.2, CONCAWE1B.1, CONCAWE1B.6, CONCAWE1B.3, CONCAWE1B.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)

Further specification : Specific Environmental Release Category: ESVOC 6.1a.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 300

Environment factors not influenced by risk management : River flow rate: 18000 m³/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
1% Release fraction to surface water from process.
0.1% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

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Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent**

Further specification : Same for all PROC
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06a: Industrial use resulting in manufacture of another substance (use of intermediates)

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.
Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.034018
 Freshwater sediments (mg/kg d.w.) : 0.124428
 Marine water (mg/l) : 0.003518
 Marine water sediments (mg/kg d.w.) : 0.012866
 Agricultural soil (mg/kg dwt): 0.008978
 Grassland (mg/kg dwt): 0.008597
 Sewage Treatment Plant (mg/l) : 0.296546

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic
Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic
Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 107 - Use as binders and release agents in industrial settings - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use as binders and release agents - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC06, PROC07, PROC08b, PROC10, PROC13, PROC14
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC06: Calendering operations - PROC06
PROC07: Industrial spraying - PROC07
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14

Number of the ES	: 107
Industry Association	: ConcaWE
Processes and activities covered by the exposure scenario	: Use as binders and release agents , including material transfers, mixing, application and disposal.
Additional information	: Site 1+ 2 CONCAWE10A.6, CONCAWE10A.7, CONCAWE10A.9, CONCAWE10A.8, CONCAWE10A.2, CONCAWE10A.3, CONCAWE10A.5, CONCAWE10A.10, CONCAWE10A.1, CONCAWE10A.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 4.10.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 20% Release fraction to air from process. 0.01% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure**

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)**

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC06: Calendering operations**

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC07: Industrial spraying**

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing**

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.005253
- Freshwater sediments (mg/kg d.w.) : 0.019213
- Marine water (mg/l) : 0.000641
- Marine water sediments (mg/kg d.w.) : 0.002345
- Agricultural soil (mg/kg dwt): 0.011655
- Grassland (mg/kg dwt): 0.014497
- Sewage Treatment Plant (mg/l) : 0.008896

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): 0.342857
- Inhalation exposure (mg/m³) : 0.123333
- Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC06: Calendering operations

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 36.238

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 246.667
Combined routes (mg/kg bw/day): 78.095

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 12.238

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 108 - Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in industrial equipment - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in industrial equipment - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC07

Environmental contributing scenarios : **ERC07: Industrial use of substances in closed systems - ERC07**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES	: 108
Industry Association	: Concaawe
Processes and activities covered by the exposure scenario	: Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in industrial equipment including maintenance and related material transfers
Additional information	: Site 1+ 2 CONCAWE13A.4, CONCAWE13A.1, CONCAWE13A.2, CONCAWE13A.5, CONCAWE13A.3, CONCAWE13A.6, CONCAWE13A.7

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC07: Industrial use of substances in closed systems**

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 7.13a.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 20
Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068	ES 108 - Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in industrial equipment - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Other given operational conditions affecting environmental exposure	: 0.01% Release fraction to air from process. 0.1% Release fraction to surface water from process. 0.1% Release fraction to soil from process. 1% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure	
Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure	
Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)	
Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises	
Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

SILIPON RN6068 *ES 108 - Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in industrial equipment - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts*

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC07: Industrial use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.
Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004808
Freshwater sediments (mg/kg d.w.) : 0.017586
Marine water (mg/l) : 0.000597
Marine water sediments (mg/kg d.w.) : 0.002182
Agricultural soil (mg/kg dwt): 0.008577
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.004448

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic
Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 108 - Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in industrial equipment - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 109 - Use in coatings (paints, inks, adhesives, etc) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use in coatings (paints, inks, adhesives, etc) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC10, PROC13, PROC15
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04
Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC07: Industrial spraying - PROC07
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 109
Industry Association : Concauwe
Additional information : Site 1+ 2

CONCAWE-3A.6, CONCAWE-3A.4, CONCAWE-3A.3, CONCAWE-3A.11,
CONCAWE-3A.1, CONCAWE-3A.5, CONCAWE-3A.8, CONCAWE-3A.9,
CONCAWE-3A.10, CONCAWE-3A.2, CONCAWE-3A.7

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 4.3a.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 300

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Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 9.8% Release fraction to air from process. 2% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC07: Industrial spraying**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.063672
- Freshwater sediments (mg/kg d.w.) : 0.232897
- Marine water (mg/l) : 0.006483
- Marine water sediments (mg/kg d.w.) : 0.023713
- Agricultural soil (mg/kg dwt): 0.010891
- Grassland (mg/kg dwt): 0.011526
- Sewage Treatment Plant (mg/l) : 0.593093

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 42.857
Inhalation exposure (mg/m³) : 246.667
Combined routes (mg/kg bw/day): 78.095

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 45.048

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 110 - Use of lubricants in high energy open processes - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use of lubricants in high energy open processes - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC08b, PROC17
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC24, PC25

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC17: Lubrication at high energy conditions and in partly open process - PROC17

Number of the ES	: 110
Industry Association	: ATIEL-Group
Processes and activities covered by the exposure scenario	: Use of lubricants in high energy open processes e.g. in high speed machinery such as metal rolling / forming or metalworking fluids for machining and grinding.
Additional information	: Site 1 + 2 ATIEL-Group_FI.1.8, ATIELGroup_FI.1.1, ATIEL-Group_FI.1.5, ATIEL-Group_FI.1.6, ATIEL-Group_FI.1.7, ATIEL-Group_FI.1.4, ATIEL-Group_FI.1.3, ATIEL-Group_FI.1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Amounts used : 2 Tonnes/year
Frequency and duration of use : Release times per year: 20
Environment factors not influenced by risk management : River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 100%
Release fraction to water from process: 100%
Release fraction to soil from process: 5%
Fraction used at main source: 100%
Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Date of issue/Date of revision : ^(ES Revision date)

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Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure**Further specification** : Same for all PROC.**Frequency and duration of use** : Duration of activity: > 4 hour(s)**Area of use:** : Indoor**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities****Further specification** : Same for all PROC.**Frequency and duration of use** : Duration of activity: > 4 hour(s)**Area of use:** : Indoor**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process****Further specification** : Same for all PROC.**Frequency and duration of use** : Duration of activity: > 4 hour(s)**Area of use:** : Indoor**Conditions and measures related to personal protection and hygiene****Section 3 - Exposure estimation and reference to its source****Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009824
Grassland (mg/kg dwt): 0.008709
Sewage Treatment Plant (mg/l) : 0.889639**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³): 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³): 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³): 246.667
Combined routes (mg/kg bw/day): 62.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 111 - Use of lubricants in open high temperature processes - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use of lubricants in open high temperature processes - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08b, PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC24, PC25

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b**
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 111
Industry Association	: ATIEL-Group
Processes and activities covered by the exposure scenario	: Use of lubricants in open high temperature processes e.g. quenching fluids, glass release agents.
Additional information	: Site 1 + 2 ATIEL-Group_DI1.2, ATIEL-Group_DI1.3, ATIEL-Group_DI1.1, ATIEL-Group_DI1.4, ATIEL-Group_DI1.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Amounts used : 2 Tonnes/year

Frequency and duration of use : Release times per year: 20

Environment factors not influenced by risk management : River flow rate: 18000 m3/d.

Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 100%
Release fraction to water from process: 100%
Release fraction to soil from process: 5%
Fraction used at main source: 100%
Fraction tonnage to region: 100%

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**

Further specification : Same for all PROC.

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009824
Grassland (mg/kg dwt): 0.008709
Sewage Treatment Plant (mg/l) : 0.889639**Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³): 61.667
Combined routes (mg/kg bw/day): 15.667**Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring**

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³): 123.333
Combined routes (mg/kg bw/day): 31.333**Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**

SILIPON RN6068

ES 111 - Use of lubricants in open high temperature processes - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 112 - Use of sealed items containing functional fluids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use of sealed items containing functional fluids - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09a
Market sector by type of chemical product: PC24, PC25
Environmental contributing scenarios : **ERC09a: Wide dispersive indoor use of substances in closed systems - ERC09a**
Health Contributing scenarios :

Number of the ES : 112
Industry Association : ATIEL-Group
Processes and activities covered by the exposure scenario : Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids.
Additional information : Site 1 + 2
ATIEL-Group_DI1.2, ATIEL-Group_DI1.3, ATIEL-Group_DI1.1, ATIEL-Group_DI1.4, ATIEL-Group_DI1.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC09a: Wide dispersive indoor use of substances in closed systems

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 9.13c.v1
Amounts used : 1 000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 5%
Release fraction to water from process: 2.5%
Release fraction to soil from process: 2.5%
Fraction used at main source: 0.05%
Fraction tonnage to region: 10%
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Date of issue/Date of revision : ^ (ES Revision date)

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SILIPON RN6068 *ES 112 - Use of sealed items containing functional fluids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts*

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for:
Further specification : Same for all PROC.
Frequency and duration of use : Duration of activity: > 4 hour(s)
Area of use: : Indoor
Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09a: Wide dispersive indoor use of substances in closed systems
Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.
Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004366
Freshwater sediments (mg/kg d.w.) : 0.01597
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.00202
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.00003

Exposure estimation and reference to its source - Workers:
Exposure assessment (human): : Not available.
Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 113 - Use of substances within laboratory settings - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use of substances within laboratory settings - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC10, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC24, PC25

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC10: Roller application or brushing** - PROC10
PROC15: Use as laboratory reagent - PROC15

Number of the ES	: 113
Industry Association	: Concawe
Processes and activities covered by the exposure scenario	: Use of small quantities within laboratory settings, including material transfers and equipment cleaning.
Additional information	: Site 1 + 2 CONCAWE17A.1, CONCAWE17A.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*	
Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 4.24.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 2.5 Release fraction to water from process: 2% Release fraction to soil from process: 0.01% Fraction used at main source: 0.2% Fraction tonnage to region: 100%
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068	ES 113 - Use of substances within laboratory settings - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.006142 Freshwater sediments (mg/kg d.w.) : 0.022467 Marine water (mg/l) : 0.00073 Marine water sediments (mg/kg d.w.) : 0.00267 Agricultural soil (mg/kg dwt): 0.008596 Grassland (mg/kg dwt): 0.008574 Sewage Treatment Plant (mg/l) : 0.017793
Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 27.429 Inhalation exposure (mg/m ³) : 123.333 Combined routes (mg/kg bw/day): 45.048
Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

**ES 113 - Use of substances within laboratory settings -
Industrial - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts**

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 114 - Use of substances within laboratory settings, within enclosed or contained systems - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use of substances within laboratory settings, within enclosed or contained systems - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC10, PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC24, PC25

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC10: Roller application or brushing - PROC10**
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 114
Industry Association : Concawe
Processes and activities covered by the exposure scenario : Use of small quantities within laboratory settings within enclosed or contained systems, including incidental exposures during material transfers and equipment cleaning.
Additional information : Site 1 + 2
CONCAWE17B.1, CONCAWE17B.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 4.24.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 20
Environment factors not influenced by risk management : River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 2.5
Release fraction to water from process: 2%
Release fraction to soil from process: 0.01%
Fraction used at main source: 0.2%
Fraction tonnage to region: 100%
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068	ES 114 - Use of substances within laboratory settings, within enclosed or contained systems - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent	
Further specification	: Same for all PROC.
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.006142 Freshwater sediments (mg/kg d.w.) : 0.022467 Marine water (mg/l) : 0.00073 Marine water sediments (mg/kg d.w.) : 0.00267 Agricultural soil (mg/kg dwt): 0.008596 Grassland (mg/kg dwt): 0.008574 Sewage Treatment Plant (mg/l) : 0.017793
Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 27.429 Inhalation exposure (mg/m ³) : 123.333 Combined routes (mg/kg bw/day): 45.048
Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.342857 Inhalation exposure (mg/m ³) : 61.667 Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

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***ES 114 - Use of substances within laboratory settings,
within enclosed or contained systems - Industrial -
Sulfuric acid, mono-C12-14-alkyl esters, sodium salts***

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 115 - Use of substances for the treatment of water at industrial facilities in open and closed systems - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use of substances for the treatment of water at industrial facilities in open and closed systems - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES : 115

Industry Association : Concauwe

Additional information : Site 1+ 2

CONCAWE21A.7, CONCAWE21A.5, CONCAWE21A.2, CONCAWE21A.6,
CONCAWE21A.4, CONCAWE21A.3, CONCAWE21A.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 3.22a.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 300

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

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Other given operational conditions affecting environmental exposure	: 5% Release fraction to air from process. 95% Release fraction to surface water from process. 0% Release fraction to soil from process. 3% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.088879
- Freshwater sediments (mg/kg d.w.) : 0.325096
- Marine water (mg/l) : 0.009004
- Marine water sediments (mg/kg d.w.) : 0.032933
- Agricultural soil (mg/kg dwt): 0.009755
- Grassland (mg/kg dwt): 0.00869
- Sewage Treatment Plant (mg/l) : 0.845157

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): 0.342857
- Inhalation exposure (mg/m³) : 0.123333
- Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

SILIPON RN6068

ES 115 - Use of substances for the treatment of water at industrial facilities in open and closed systems - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 116 - Use of the substance in extraction processes at mining operations - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use of the substance in extraction processes at mining operations - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: In a mixture, As such
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES	: 116
Industry Association	: ConcaWE
Processes and activities covered by the exposure scenario	: Includes material transfers, winning and separation activities, and substance recovery and disposal.
Additional information	: Site 1+ 2 CONCAWE22.7, CONCAWE22.1, CONCAWE22.4, CONCAWE22.6, CONCAWE22.3, CONCAWE22.5, CONCAWE22.8, CONCAWE22.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 4.23.v1
Amounts used : 4 Tonnes/year
Frequency and duration of use : Release times per year: 20

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 5% Release fraction to air from process.
50% Release fraction to surface water from process.
5% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.093327
- Freshwater sediments (mg/kg d.w.) : 0.341366
- Marine water (mg/l) : 0.009448
- Marine water sediments (mg/kg d.w.) : 0.03456
- Agricultural soil (mg/kg dwt): 0.009796
- Grassland (mg/kg dwt): 0.008655
- Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 22.524

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

SILIPON RN6068

**ES 116 - Use of the substance in extraction processes
at mining operations - Industrial - Sulfuric acid, mono-
C12-14-alkyl esters, sodium salts**

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
 Code : 00032069
 Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 117 - Application of non processing aids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Application of non processing aids - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC07, PROC13, PROC17
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC24, PC34

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix - ERC05**

Health Contributing scenarios : **PROC07: Industrial spraying - PROC07**
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC17: Lubrication at high energy conditions and in partly open process - PROC17

Number of the ES	: 117
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-F7.2, TEGEWA-F7.1, TEGEWA-F7.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.

SILIPON RN6068 *ES 117 - Application of non processing aids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts*

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.085239
Freshwater sediments (mg/kg d.w.) : 0.311784
Marine water (mg/l) : 0.00864
Marine water sediments (mg/kg d.w.) : 0.031602
Agricultural soil (mg/kg dwt): 0.009682
Grassland (mg/kg dwt): 0.008642

Date of issue/Date of revision : ^ (ES Revision date)

528/934

Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying**Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.42857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 9.238**Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 1.899**Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.274286
Inhalation exposure (mg/m³) : 12.333
Combined routes (mg/kg bw/day): 2.036**Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES****Environment** : Not available.**Health** : Not available.**Additional good practice advice beyond the REACH CSA****Environment** : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
 Code : 00032069
 Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 118 - Application of processing aids - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Application of processing aids - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC07, PROC13, PROC17
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC24, PC34

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC07: Industrial spraying - PROC07**
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC17: Lubrication at high energy conditions and in partly open process - PROC17

Number of the ES	: 118
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-F4.2, TEGEWA-F4.3, TEGEWA-F4.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles**

Amounts used : 1 Tonnes/year

Frequency and duration of use : Release times per year: 20

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
 100% Release fraction to surface water from process.
 5% Release fraction to soil from process.
 100% Fraction used at main source.
 100% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC07: Industrial spraying

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.048845
 Freshwater sediments (mg/kg d.w.) : 0.178662
 Marine water (mg/l) : 0.005
 Marine water sediments (mg/kg d.w.) : 0.01829
 Agricultural soil (mg/kg dwt): 0.009197
 Grassland (mg/kg dwt): 0.00864
 Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC07: Industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.42857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 9.238

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.137143
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 1.899

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.274286
 Inhalation exposure (mg/m³) : 0.274286
 Combined routes (mg/kg bw/day): 2.036

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 119 - Blending (Bound in Product) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Blending (bound in product) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC03
Market sector by type of chemical product: PC34

Environmental contributing scenarios : **ERC03: Formulation in materials - ERC03**

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05**

Number of the ES	: 119
Industry Association	: TEGEWA
Additional information	: Site 1
	TEGEWA-T2.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC03: Formulation in materials

Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 30% Release fraction to air from process. 0.2% Release fraction to surface water from process. 0.1% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Frequency and duration of use : Duration of activity: 60 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: 1 - 4 hour(s)

Respiratory protection : Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC03: Formulation in materials

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.022156
 Freshwater sediments (mg/kg d.w.) : 0.08104
 Marine water (mg/l) : 0.002331
 Marine water sediments (mg/kg d.w.) : 0.008527
 Agricultural soil (mg/kg dwt): 0.013423
 Grassland (mg/kg dwt): 0.017474
 Sewage Treatment Plant (mg/l) : 0.177928

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 0.770833
 Combined routes (mg/kg bw/day): 2.853

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 120 - Extrusion (Inclusion in Matrix) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Extrusion (Inclusion in Matrix) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC14
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC32, PC34
Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix - ERC05**
Health Contributing scenarios : **PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14**

Number of the ES	: 120
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-T17.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.085239
 Freshwater sediments (mg/kg d.w.) : 0.311784
 Marine water (mg/l) : 0.00864
 Marine water sediments (mg/kg d.w.) : 0.031602
 Agricultural soil (mg/kg dwt): 0.009682
 Grassland (mg/kg dwt): 0.008642
 Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.685714
 Inhalation exposure (mg/m³) : 6.167
 Combined routes (mg/kg bw/day): 1.567

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 121 - Extrusion (Reactive) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Extrusion (reactive) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC14
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06d
Market sector by type of chemical product: PC32, PC34

Environmental contributing scenarios : **ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers - ERC06d**

Health Contributing scenarios : **PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14**

Number of the ES	: 121
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-T18.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 35% Release fraction to air from process. 0.005% Release fraction to surface water from process. 0.025% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Frequency and duration of use : Duration of activity: >4 hours

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration ::
 Freshwater (mg/l) 0.000081
 Freshwater sediments (mg/kg d.w.) : 0.000343
 Marine water (mg/l) : 0.000028
 Marine water sediments (mg/kg d.w.) : 0.000118
 Agricultural soil (mg/kg dwt): 0.001101
 Grassland (mg/kg dwt): 0.001369
 Sewage Treatment Plant (mg/l) : 0.000022

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 3.429
 Inhalation exposure (mg/m³) : 1.162
 Combined routes (mg/kg bw/day): 3.595

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 122 - Handling (Inclusion in Matrix) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Handling (Inclusion in Matrix) - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC20, PC23, PC24, PC32, PC34

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix - ERC05**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES	: 122
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-T4.2, TEGEWA-L3.1, TEGEWA-T4.3, TEGEWA-L3.3, TEGEWA-F6.1, TEGEWA-T4.1, TEGEWA-L3.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068	ES 122 - Handling (Inclusion in Matrix) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Frequency and duration of use	: Duration of activity: 60 min/day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).
Respiratory protection	: Wear respiratory protection: 90%
Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Further specification	: Sub-scenario(s): 1- with local exhaust ventilation 2- Without LEV
Frequency and duration of use	: Duration of activity / Sub-scenario(s): 1- with local exhaust ventilation: >4 hours 2- Without LEV: 60 min/day
Other given operational conditions affecting workers exposure	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Sub-scenario(s): 1- with local exhaust ventilation 2- Without LEV
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1- with local exhaust ventilation > 4 hour(s) 2- Without LEV: 1 - 4 hour(s).
Respiratory protection	: Without LEV: Wear respiratory protection: 90%
Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Frequency and duration of use	: Duration of activity: 60 min/day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).
Respiratory protection	: Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
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Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.085239
 Freshwater sediments (mg/kg d.w.) : 0.311784
 Marine water (mg/l) : 0.00864
 Marine water sediments (mg/kg d.w.) : 0.031602
 Agricultural soil (mg/kg dwt): 0.009682
 Grassland (mg/kg dwt): 0.008642
 Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 1.542
 Combined routes (mg/kg bw/day): 2.963

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations
respectively [with local exhaust ventilation; Without LEV]:
 Dermal exposure (mg/kg bw/day): [0.137143; 1.371]
 Inhalation exposure (mg/m³) : [1.85; 0.770833]
 Combined routes (mg/kg bw/day): [0.401429; 1.482]

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 0.770833
 Combined routes (mg/kg bw/day): 1.482

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 123 - Handling (Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Handling (Reactive Processing Aids) - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06b
Market sector by type of chemical product: PC20, PC23, PC32, PC34

Environmental contributing scenarios : **ERC06b: Industrial use of reactive processing aids - ERC06b**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES	: 218
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-L4.2, TEGEWA-T5.3, TEGEWA-L4.3, TEGEWA-T5.1, TEGEWA-T5.2, TEGEWA-L4.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC06b: Industrial use of reactive processing aids**

Further specification : Specific Environmental Release Category: TEGEWA SPERC Code 6b.1.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 220

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
2% Release fraction to surface water from process.
0% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

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Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC
Frequency and duration of use : Duration of activity: 60 min/day
Other given operational conditions affecting workers exposure : Indoor
Conditions and measures related to personal protection and hygiene
Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).
Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC
Frequency and duration of use : Duration of activity: 60 min/day
Other given operational conditions affecting workers exposure : Indoor
Conditions and measures related to personal protection and hygiene
Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).
Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC
Frequency and duration of use : Duration of activity: 60 min/day
Other given operational conditions affecting workers exposure : Indoor
Conditions and measures related to personal protection and hygiene
Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).
Respiratory protection : Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06b: Industrial use of reactive processing aids

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.085239
 Freshwater sediments (mg/kg d.w.) : 0.311784
 Marine water (mg/l) : 0.00864
 Marine water sediments (mg/kg d.w.) : 0.031602
 Agricultural soil (mg/kg dwt): 0.009682
 Grassland (mg/kg dwt): 0.008642
 Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 1.542
 Combined routes (mg/kg bw/day): 2.963

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 0.770833
 Combined routes (mg/kg bw/day): 1.482

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 0.770833
 Combined routes (mg/kg bw/day): 1.482

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 124 - Lubrication - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Lubricants - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC17
Substance supplied to that use in form of: In a mixture, As such
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC24

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles - ERC04**

Health Contributing scenarios : **PROC17: Lubrication at high energy conditions and in partly open process - PROC17**

Number of the ES	: 124
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-T19.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Amounts used : 1 Tonnes/year

Frequency and duration of use : Release times per year: 20

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
100% Release fraction to surface water from process.
5% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process

Frequency and duration of use : Duration of activity >4 hours

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: >4 hours.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.048845
 Freshwater sediments (mg/kg d.w.) : 0.178662
 Marine water (mg/l) : 0.005
 Marine water sediments (mg/kg d.w.) : 0.01829
 Agricultural soil (mg/kg dwt): 0.009197
 Grassland (mg/kg dwt): 0.00864
 Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 0.274286
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 2.036

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 125 - Manipulation of substances bound in materials - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Manipulation of substances bound in materials - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC21
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC01, PC32, PC34
Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix - ERC05**
Health Contributing scenarios : **PROC21: Low energy manipulation of substances bound in materials and/or articles - PROC21**

Number of the ES	: 125
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-T20.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC21: Low energy manipulation of substances bound in materials and/or articles

Frequency and duration of use : Duration of activity: 60 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).

Respiratory protection : Wear respiratory protection: 90%.

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.085239
Freshwater sediments (mg/kg d.w.) : 0.311784
Marine water (mg/l) : 0.00864
Marine water sediments (mg/kg d.w.) : 0.031602
Agricultural soil (mg/kg dwt): 0.009682
Grassland (mg/kg dwt): 0.008642
Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC21: Low energy manipulation of substances bound in materials and/or articles

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.565714
Inhalation exposure (mg/m³) : -
Combined routes (mg/kg bw/day): 0.565714

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 126 - Textile application: calendering - Industrial - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Textile applications: calendering - Industrial use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC06
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC34
Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix** - ERC05
Health Contributing scenarios : **PROC06: Calendering operations** - PROC06

Number of the ES	: 126
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-T6.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC06: Calendering operations

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.085239
 Freshwater sediments (mg/kg d.w.) : 0.311784
 Marine water (mg/l) : 0.00864
 Marine water sediments (mg/kg d.w.) : 0.031602
 Agricultural soil (mg/kg dwt): 0.009682
 Grassland (mg/kg dwt): 0.008642
 Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC06: Calendering operations

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.274286
 Inhalation exposure (mg/m³) : 6.167
 Combined routes (mg/kg bw/day): 1.155

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 127 - Application of surface coatings and binders in road and construction activities, including material transfers and procut disposal - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Application of surface coatings and binders in road and construction activities, including material transfers and procut disposal - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC09, PROC10, PROC11, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08d

Environmental contributing scenarios : **ERC08d: Wide dispersive outdoor use of processing aids in open systems - ERC08d**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 127
Industry Association	: ConcaWE
Additional information	: Site 1 + 2 CONCAWE15.5, CONCAWE15.6, CONCAWE15.1, CONCAWE15.3, CONCAWE15.4, CONCAWE15.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Further specification : Specific Environmental Release Category:
ESVOC SPERC Code 8.15.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 95% Release fraction to air from process.
1% Release fraction to surface water from process.
4% Release fraction to soil from process.
0.05% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. Inhalation (20%)

Frequency and duration of use : Duration of activity: >4 hours per day

Other given operational conditions affecting workers exposure : Outdoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. Inhalation (20%)

Frequency and duration of use : Duration of activity: >4 hours per day

Other given operational conditions affecting workers exposure : Outdoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. Inhalation (20%)

Frequency and duration of use : Duration of activity: >4 hours per day

Other given operational conditions affecting workers exposure : Outdoor use

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. Inhalation (20%)
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Outdoor use
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. Inhalation (20%)
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Outdoor use
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. Inhalation (20%)
Frequency and duration of use	: Duration of activity: >4 hours per day
Other given operational conditions affecting workers exposure	: Outdoor use
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.004364
	Freshwater sediments (mg/kg d.w.) : 0.015963
	Marine water (mg/l) : 0.000552
	Marine water sediments (mg/kg d.w.) : 0.00202
	Agricultural soil (mg/kg dwt): 0.008571
	Grassland (mg/kg dwt): 0.008571

SILIPON RN6068	ES 127 - Application of surface coatings and binders in road and construction activities, including material transfers and procut disposal - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sewage Treatment Plant (mg/l) : 0.000012	

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 215.833
Combined routes (mg/kg bw/day): 44.548

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 19.19

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 19.19

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 215.833
Combined routes (mg/kg bw/day): 58.262

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 107.143
Inhalation exposure (mg/m³) : 172.667
Combined routes (mg/kg bw/day): 131.81

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 26.048

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 127 - Application of surface coatings and binders in road and construction activities, including material transfers and procut disposal - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 128 - Blending - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Blending - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC20, PC23, PC24, PC32, PC34
Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02
Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05

Number of the ES	: 128
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-T1.2, TEGEWA-L1.1, TEGEWA-T1.1, TEGEWA-F2.1, TEGEWA-L1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*	
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 2.5% Release fraction to air from process. 2% Release fraction to surface water from process. 0.01% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Sub-scenario(s):
1 - with local exhaust ventilation.
2 - Without LEV.

Frequency and duration of use : Duration of activity: 60 min/day

Other given operational conditions affecting workers exposure : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s):
1 - with local exhaust ventilation.
2 - Without LEV.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 1- 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.075534
Freshwater sediments (mg/kg d.w.) : 0.276285
Marine water (mg/l) : 0.007669
Marine water sediments (mg/kg d.w.) : 0.028052
Agricultural soil (mg/kg dwt): 0.009702
Grassland (mg/kg dwt): 0.00893
Sewage Treatment Plant (mg/l) : 0.711711

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day):
with local exhaust ventilation: 0.013714
Without LEV : 2.743
Inhalation exposure (mg/m³) :
with local exhaust ventilation : 3.083
Without LEV : 15.417
Combined routes (mg/kg bw/day):
with local exhaust ventilation : 0.45419
Without LEV : 4.945

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 129 - Professional coatings and inks application (Indoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Professional coatings and inks application - Indoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC03, PROC04, PROC05, PROC08a, PROC10, PROC11, PROC19
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix - ERC08c**
Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC19: Hand-mixing with intimate contact and only PPE available - PROC19

Number of the ES : 129
Industry Association : CEPE
Additional information : Site 1 + 2

CEPE-AP0201, CEPE-AP1101, CEPE-AP0302, CEPE-AP0403, CEPE-AP0407, CEPE-AP0202, CEPE-AP0702, CEPE-AP0704, CEPE-AP0406, CEPE-AP1202, CEPE-AP0405, CEPE-AP0305, CEPE-AP0502, CEPE-AP0204, CEPE-AP0303, CEPE-AP0504/AP0505, CEPE-AP0506/AP0507, CEPE-AP0701, CEPE-AP0103

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix**
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure	: 15% Release fraction to air from process. 1% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: <u>Sub-scenario(s)</u> : 1- loading of application equipment - closed continuous process 2- film formation - force drying (50-100C) 3- film formation - stoving (>100C) 4- film formation - UV/EB radiation curing
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Sub-scenario(s) 1 : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Sub-scenario(s) 2; 3; 4 : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: <u>Sub-scenario(s)</u> : 1- Preparation of material for application - closed continuous process 2- product delivery/storage - product storage
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Sub-scenario(s) 1 : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Sub-scenario(s) 1 : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.
Conditions and measures related to personal protection and hygiene	

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Sub-scenario(s):
 1- QC laboratory
 2- Preparation of material for application - batch and indoor
 3- Equipment cleaning - open in situ - Indoor
 4- Equipment cleaning - open off-line - Indoor
 5- loading of application equipment - batch and indoor

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Further specification : Sub-scenario(s) Manual spray application:
1- Without LEV
2- with local exhaust ventilation

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s):
1- Without LEV
2- with local exhaust ventilation

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC19: Hand-mixing with intimate contact and only PPE available

Further specification : Sub-scenario(s) Manual Hand application:
1- Without LEV
2- with local exhaust ventilation

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s):
1- with local exhaust ventilation
2- Without LEV

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004368
Freshwater sediments (mg/kg d.w.) : 0.015976
Marine water (mg/l) : 0.000553
Marine water sediments (mg/kg d.w.) : 0.002021
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Sub-scenario(s):
1- loading of application equipment - closed continuous process
2- film formation - force drying (50-100C)
3- film formation - stoving (>100C)
4- film formation - UV/EB radiation curing

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day):
Sub-scenario(s) 1 : 0.027429
Sub-scenario(s) 2; 3; 4 : 0.137143
Inhalation exposure (mg/m³) :
Sub-scenario(s) 1 : 12.333
Sub-scenario(s) 2; 3; 4 : 1.233
Combined routes (mg/kg bw/day):
Sub-scenario(s) 1 : 1.789
Sub-scenario(s) 2; 3; 4 : 0.313333

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Preparation of material for application ; product storage]
Dermal exposure (mg/kg bw/day): [0.006857; 0.034286]
Inhalation exposure (mg/m³) : [0.740; 7.4]
Combined routes (mg/kg bw/day): [0.112571; 1.091]

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 2.467
Combined routes (mg/kg bw/day): 0.489524

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.013714
Inhalation exposure (mg/m³) : 2.467
Combined routes (mg/kg bw/day): 0.366095

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.027429
Inhalation exposure (mg/m³) : 6.167
Combined routes (mg/kg bw/day): 0.908381

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.274286
Inhalation exposure (mg/m³) : 6.167
Combined routes (mg/kg bw/day): 1.155

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Without LEV ; with local exhaust ventilation]
Dermal exposure (mg/kg bw/day): [21.429; 0.428571]
Inhalation exposure (mg/m³) : [123.333; 24.667]
Combined routes (mg/kg bw/day): [39.048; 3.952]

Exposure estimation and reference to its source - Workers: PROC19: Hand-mixing with intimate contact and only PPE available

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Without LEV ; with local exhaust ventilation]
Dermal exposure (mg/kg bw/day): [28.286; 2.829]
Inhalation exposure (mg/m³) : [30.833; 6.167]
Combined routes (mg/kg bw/day): [32.69; 3.71]

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
 Code : 00032069
 Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 130 - Professional coatings and inks application (Outdoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional coatings and inks application - Outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC03, PROC04, PROC05, PROC08a, PROC10, PROC11
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08f

Environmental contributing scenarios : **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix - ERC08f**

Health Contributing scenarios : **PROC03: Use in closed batch process (synthesis or formulation) - PROC03**
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES	: 130
Industry Association	: CEPE
Additional information	: Site 1 + 2
	CEPE-AP1203, CEPE-AP0203, CEPE-AP0404, CEPEAP0703, CEPE-AP0402, CEPE-AP0705, CEPE-AP0304, CEPE-AP0501, CEPE-AP0401, CEPE-AP0205, CEPE-AP0101, CEPE-AP1201, CEPEAP0102, CEPE-AP0503, CEPE-AP0104

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix	
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 15% Release fraction to air from process. 1% Release fraction to surface water from process. 0.5% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Sub-scenario(s):
1- Preparation of material for application - closed continuous process
2- product delivery/storage - product storage

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)**

Further specification : Sub-scenario(s):
1- QC laboratory
2- Preparation of material for application - batch and indoor
3- Equipment cleaning - open in situ - Indoor
4- Equipment cleaning - open off-line - Indoor
5- loading of application equipment - batch and indoor

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004368
Freshwater sediments (mg/kg d.w.) : 0.015976
Marine water (mg/l) : 0.000553
Marine water sediments (mg/kg d.w.) : 0.002021
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 25.9
Combined routes (mg/kg bw/day): 4.043

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 19.19

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 15.076

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 215.833
Combined routes (mg/kg bw/day): 33.576

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 5.486
Inhalation exposure (mg/m³) : 21.583
Combined routes (mg/kg bw/day): 8.569

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 21.429
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 33.762

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 131 - Wide Dispersive Use in Down the Drain products - hair and skin care products (Consumers and Professionals) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios :

Number of the ES	: 131
Industry Association	: Colipa
Additional information	: Site 1 + 2
	Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: Colipa SPERC Code 8a.1.a.v1

Amounts used : 5100 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m³/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

SILIPON RN6068

ES 131 - Wide Dispersive Use in Down the Drain products - hair and skin care products (Consumers and Professionals) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

**Contributing scenario controlling worker exposure for:
Conditions and measures related to personal protection and hygiene**

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.
Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.005295
Freshwater sediments (mg/kg d.w.) : 0.019369
Marine water (mg/l) : 0.000645
Marine water sediments (mg/kg d.w.) : 0.00236
Agricultural soil (mg/kg dwt): 0.008584
Grassland (mg/kg dwt): 0.008572
Sewage Treatment Plant (mg/l) : 0.009323

Exposure estimation and reference to its source - Workers:

Exposure assessment (human): : Not available.
Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 132 - Covers exposure arising from the manufacturing and use of slurry explosives - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Covers exposure arising from the manufacturing and use of slurry explosives - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC03, PROC05, PROC08a, PROC08b
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08e

Environmental contributing scenarios : **ERC08e: Wide dispersive outdoor use of reactive substances in open systems** - ERC08e

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b

Number of the ES	: 132
Additional information	: Site 1 + 2 CONCAWE18.4, CONCAWE18.1, CONCAWE18.5, CONCAWE18.2, CONCAWE18.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08e: Wide dispersive outdoor use of reactive substances in open systems	
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0.1% Release fraction to air from process. 2% Release fraction to surface water from process. 1% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08e: Wide dispersive outdoor use of reactive substances in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.004373
	Freshwater sediments (mg/kg d.w.) : 0.015994
	Marine water (mg/l) : 0.000553
	Marine water sediments (mg/kg d.w.) : 0.002023
	Agricultural soil (mg/kg dwt): 0.008571
	Grassland (mg/kg dwt): 0.008571
	Sewage Treatment Plant (mg/l): 0.000097

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 0.342857
	Inhalation exposure (mg/m ³) : 0.086333
	Combined routes (mg/kg bw/day): 0.35519

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 0.342857
	Inhalation exposure (mg/m ³) : 25.9
	Combined routes (mg/kg bw/day): 4.043

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 13.714
	Inhalation exposure (mg/m ³) : 86.333
	Combined routes (mg/kg bw/day): 26.048

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 13.714
	Inhalation exposure (mg/m ³) : 215.833
	Combined routes (mg/kg bw/day): 44.548

SILIPON RN6068

ES 132 - Covers exposure arising from the manufacturing and use of slurry explosives - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 19.19

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 133 - De-icing of vehicles and similar equipment by spraying - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** De-icing of vehicles and similar equipment by spraying. - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08d

Environmental contributing scenarios : **ERC08d: Wide dispersive outdoor use of processing aids in open systems - ERC08d**

Health Contributing scenarios :

Number of the ES : 133
Additional information : Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 8.14b.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 90% Release fraction to air from process.
5% Release fraction to surface water from process.
5% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

**Contributing scenario controlling worker exposure for:
Conditions and measures related to personal protection and hygiene**

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004387
 Freshwater sediments (mg/kg d.w.) : 0.016048
 Marine water (mg/l) : 0.000554
 Marine water sediments (mg/kg d.w.) : 0.002028
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l): 0.000244

Exposure estimation and reference to its source - Workers:

Exposure assessment (human): : Not available.

Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 134 - De-icing of vehicles, aircraft and other equipment by spraying - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** De-icing of vehicles, aircraft and other equipment by spraying - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC11
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08d

Environmental contributing scenarios : **ERC08d: Wide dispersive outdoor use of processing aids in open systems - ERC08d**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC11: Non industrial spraying - PROC11

Number of the ES	: 134
Additional information	: Site 1 + 2 CONCAWE14A.5, CONCAWE14A.4, CONCAWE14A.1, CONCAWE14A.3, CONCAWE14A.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 8.14a.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 95% Release fraction to air from process. 1% Release fraction to surface water from process. 4% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%
Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure**

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%
Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%
Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%
Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying**

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%
Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.004368
	Freshwater sediments (mg/kg d.w.) : 0.015976
	Marine water (mg/l) : 0.000553
	Marine water sediments (mg/kg d.w.) : 0.002021
	Agricultural soil (mg/kg dwt): 0.008571
	Grassland (mg/kg dwt): 0.008571
	Sewage Treatment Plant (mg/l): 0.000049

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 0.342857
	Inhalation exposure (mg/m ³) : 0.086333
	Combined routes (mg/kg bw/day): 0.35519

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 1.371
	Inhalation exposure (mg/m ³) : 43.167
	Combined routes (mg/kg bw/day): 7.538

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 13.714
	Inhalation exposure (mg/m ³) : 215.833
	Combined routes (mg/kg bw/day): 44.548

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 6.857
	Inhalation exposure (mg/m ³) : 86.333
	Combined routes (mg/kg bw/day): 19.19

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 107.143
	Inhalation exposure (mg/m ³) : 172.667
	Combined routes (mg/kg bw/day): 131.81

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 135 - Use as co-formulant in solid Plant Protection Products - foliar application by professionals, outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as co-formulant in liquid Plant Protection Products (PPPs) - foliar application by professionals - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **ECPA OWB - PROC**

Number of the ES	: 135
Industry Association	: ECPA
Additional information	: Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ECPA SPERC Code 8d.2.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 100% Release fraction to water from process: 0% Release fraction to soil from process: 0% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: ECPA OWB

Further specification : - PROC: Other: ECPA OWB

For solid Plant Protection Products, the highest exposure potential is associated with the use in tractor-mounted groundboom spraying on low crops in the field. The ES covers the mixing and loading (M&L) of the solid preparation into the spray tank and the application of the spray using a tractor-mounted ground-boom sprayer. The use of PPPs is assessed for professional users (mostly farmers). PPP use by amateurs will be less frequent (once or twice per year rather than on more than ten days per season) and on a much smaller scale (100 m² rather than several ha) than by professionals. Thus, no designated assessment for consumer uses of PPPs is presented. The indoor use of solid PPPs occurs at a smaller scale than the outdoor use. Indoor uses are therefore covered by the outdoor use which constitutes the worst case for solids.

Concentration of substance in mixture or article : - Concentration of substance in preparation: up to 99% (Maximum value for solid carrier, typical value 1-10%)
- Concentration after dilution for use (if relevant): 1% (typical dilution 1:100 in water)

Physical state : Solid

Dust : high (worst-case preparation: wettable powders (WP))

Amounts used : Used amount of substance (as such or in preparation) per worker (workplace) per day: 20 kg/day

Frequency and duration of use : - Frequency of exposure at workplace (for one worker): 1-10 times per season (Applications are mainly during spring and summer. Operators may encounter the substance up to 10 time(s))
- Duration of exposure per day at workplace (for one worker): 6 hours per day (realistic worst-case duration of actual spraying process)
- Emission Days (days/year) 1-10 (related to that preparation category)

Human factors not influenced by risk management : - Area of skin contact with the substance under conditions of use: 19 400 cm² (whole body is potentially exposed)
- Body weight: 70 kg (Default for workers)

Other given operational conditions affecting workers exposure : - Room size: Not applicable. (Outdoor use)
- Respiration volume under conditions of use: 10 m³ / day (Light work)

Ventilation control measures : - Ventilation Rate: Not applicable. (Outdoor use)

Product substance-related measures : None

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

SILIPON RN6068 *ES 135 - Use as co-formulant in solid Plant Protection Products - foliar application by professionals, outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts*

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008583
Grassland (mg/kg dwt): 0.008572
Sewage Treatment Plant (mg/l): 0

Exposure estimation and reference to its source - Workers: ECPA OWB

Exposure assessment (human): : Calculation tool used: ECPA OWB
Effects: Long term Systemic
PROC: Other: ECPA OWB
Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.297
Inhalation exposure (mg/m³) : 0.142

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 136 - Use as co-formulant in liquid Plant Protection Products - foliar application by professionals, outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as co-formulant in liquid Plant Protection Products (PPPs) - foliar application by professionals - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **ECPA OWB - PROC**

Number of the ES	: 136
Industry Association	: ECPA
Additional information	: Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08a: Wide dispersive indoor use of processing aids in open systems**

Further specification	: Specific Environmental Release Category: ECPA SPERC Code 8d.2.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 100% Release fraction to water from process: 0% Release fraction to soil from process: 0% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: ECPA OWB

Further specification	: - PROC: Other: ECPA OWB
	For liquid PPPs, the highest exposure potential is associated with application by hand-held spraying to high targets (e.g., orchards). The ES covers the mixing and loading (M&L) of the liquid preparation into the spray tank and the application of the spray using a knapsack sprayer. The use of PPPs is assessed for professional users (mostly farmers).
Concentration of substance in mixture or article	: - Concentration of substance in preparation: up to 99% (Maximum value for a co-formulant (e.g., Solvent)) - Concentration after dilution for use (if relevant): up to 1% (typical dilution 1:100)
Physical state	: Liquid
Amounts used	: Used amount of substance (as such or in preparation) per worker (workplace) per day: 1 kg/day
Frequency and duration of use	: - Frequency of exposure at workplace (for one worker): 1-10 times per season (Applications are mainly during spring and summer. Operators may encounter the substance up to 10 time(s)) - Duration of exposure per day at workplace (for one worker): 6 hours per day (realistic worst-case duration of actual spraying process) - Emission Days (days/year) 1-10 (related to that preparation category)
Human factors not influenced by risk management	: - Area of skin contact with the substance under conditions of use: 19 400 cm ² (whole body is potentially exposed) - Body weight: 70 kg (Default for workers)
Other given operational conditions affecting workers exposure	: - Room size: Not applicable. (Outdoor use) - Respiration volume under conditions of use: 10 m ³ / day (Light work)
Area of use:	: Outdoor
Ventilation control measures	: - Ventilation Rate: Not applicable. (Outdoor use)
Product substance-related measures	: None
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004363 Freshwater sediments (mg/kg d.w.) : 0.015959 Marine water (mg/l) : 0.000552 Marine water sediments (mg/kg d.w.) : 0.002019 Agricultural soil (mg/kg dwt): 0.008583 Grassland (mg/kg dwt): 0.008572 Sewage Treatment Plant (mg/l): 0

SILIPON RN6068

ES 136 - Use as co-formulant in liquid Plant Protection Products - foliar application by professionals, outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: ECPA OWB

Exposure assessment (human): : Calculation tool used: ECPA OWB
Effects: Long term Systemic
PROC: Other: ECPA OWB

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.506
Inhalation exposure (mg/m³) : 0.035

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 137 - Use as co-formulant in liquid Plant Protection Products - foliar application in greenhouses by professionals, indoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as co-formulant in liquid Plant Protection Products (PPPs) - foliar application in greenhouses by professionals, Indoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08d

Environmental contributing scenarios : **ERC08d: Wide dispersive outdoor use of processing aids in open systems -** ERC08d

Health Contributing scenarios : **ECPA OWB - PROC**

Number of the ES	: 137
Industry Association	: ECPA
Additional information	: Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ECPA SPERC Code 8d.2.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 100% Release fraction to water from process: 0% Release fraction to soil from process: 0% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: ECPA OWB

Further specification	: - PROC: Other: ECPA OWB
	<p>For volatile co-formulants (vapour pressure 0.01 Pa), the highest exposure potential is associated with application by hand-held spraying to high targets in greenhouses. The ES covers the mixing and loading (M&L) of the liquid preparation into the spray tank and the application of the spray using a knapsack sprayer.</p> <p>The use of PPPs is assessed for professional users (mostly farmers). PPP use by amateurs will be less frequent (once or twice per year rather than on more than ten days per season) and on a much smaller scale (100 m² rather than 10,000 m²) than by professionals. Thus, no designated assessment for consumer uses of PPPs is presented.</p>
Concentration of substance in mixture or article	: - Concentration of substance in preparation: up to 99% (Maximum value for solid carrier, typical value 1-10%) - Concentration after dilution for use (if relevant): 1% (typical dilution 1:100 in water)
Physical state	: Liquid
Amounts used	: Used amount of substance (as such or in preparation) per worker (workplace) per day: 1 kg/day
Frequency and duration of use	: - Frequency of exposure at workplace (for one worker): 1-10 times per season (Applications are mainly during spring and summer. Operators may encounter the substance up to 10 time(s)) - Duration of exposure per day at workplace (for one worker): 6 hours per day (realistic worst-case duration of actual spraying process) - Emission Days (days/year) 1-10 (related to that preparation category)
Human factors not influenced by risk management	: - Area of skin contact with the substance under conditions of use: 19 400 cm ² (whole body is potentially exposed) - Body weight: 70 kg (Default for workers)
Other given operational conditions affecting workers exposure	: - Room size: 30,000 m ³ - Respiration volume under conditions of use: 10 m ³ / day (Light work)
Area of use:	: Indoor
Ventilation control measures	: - Ventilation Rate: 1 h ⁻¹ (low Ventilation Rate)
Product substance-related measures	: None
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

SILIPON RN6068

ES 137 - Use as co-formulant in liquid Plant Protection Products - foliar application in greenhouses by professionals, indoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008583
Grassland (mg/kg dwt): 0.008572
Sewage Treatment Plant (mg/l): 0

Exposure estimation and reference to its source - Workers: ECPA OWB

Exposure assessment (human): : Calculation tool used: ECPA OWB

Effects: Long term Systemic

PROC: Other: ECPA OWB

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.506
Inhalation exposure (mg/m³) : 0.0482

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 138 - Use as co-formulant in Plant Protection Products for seed treatment - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as co-formulant in liquid Plant Protection Products (PPPs) for seed treatment - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a, ERC08c, ERC08d, ERC08f

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix - ERC08c
ERC08d: Wide dispersive outdoor use of processing aids in open systems - ERC08d
ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix - ERC08f

Health Contributing scenarios : **ECPA OWB - PROC**

Number of the ES	: 138
Industry Association	: ECPA
Additional information	: Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ECPA SPERC Code 8d.1.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 0% Release fraction to water from process: 0% Release fraction to soil from process: 100% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Further specification	: Specific Environmental Release Category: ECPA
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 15% Release fraction to water from process: 0% Release fraction to soil from process: 0% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: <u>Risk management measures (RMM)</u> : No air emission controls required; required removal efficiency is 0%. No soil emission controls required; required removal efficiency is 0% Treat wastewater to provide the required removal efficiency of (%): 100
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling environmental exposure for: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ECPA SPERC Code 8d.1.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 0% Release fraction to water from process: 0% Release fraction to soil from process: 100% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling environmental exposure for: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Further specification	: Specific Environmental Release Category: ECPA
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 15% Release fraction to water from process: 0% Release fraction to soil from process: 0% Fraction used at main source: 0.2% Fraction tonnage to region: 10%

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Risk management measures (RMM): No air emission controls required; required removal efficiency is 0%. No soil emission controls required; required removal efficiency is 0% Treat wastewater to provide the required removal efficiency of (%): 100
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: ECPA OWB

Further specification	: - PROC: Other: ECPA OWB
	The activities covered by this ES include M&L of the concentrated PPP into a process tank, calibrating the transfer lines, bagging of the treated seed, and cleaning of the machinery. Seed treatment is conducted at designated facilities and is an industrial process. Small-scale farmside seed treatment in (e.g. using cement mixers) is considered to be covered by the large-scale process. The sowing of treated seed is considered to be covered by the bagging scenario because of the indoor setting of the latter and the whole-shift exposure to dust.
Concentration of substance in mixture or article	: - Concentration of substance in preparation: 50% - Concentration after dilution for use (if relevant): 25% (maximum concentration in dust adhering to treated seed)
Physical state	: Liquid (the substance is part of a liquid formulation)
Dust	: high (the treated seed is very dusty)
Amounts used	: - Used amount of substance (as such or in preparation) per worker (workplace) per day: 10 kg/day - Annual amount per site: 900 kg/yr
Frequency and duration of use	: - Frequency of exposure at workplace (for one worker): 90 time(s) per year (seed treatment is a seasonal application, two campaigns per year, prior to sowing in spring and in autumn) - Duration of exposure per day at workplace (for one worker): 8 hours per day - Emission Days (days/year) 90 (per site)
Human factors not influenced by risk management	: - Area of skin contact with the substance under conditions of use: 960 cm ² (Both hands) - Body weight: 70 kg (Default for workers)
Other given operational conditions affecting workers exposure	: - Room size: Not relevant. - Respiration volume under conditions of use: 10 m ³ / day (Light work)
Area of use:	: Indoor
Ventilation control measures	: - Ventilation Rate: Not relevant.
Product substance-related measures	: - strongly coloured: avoids use of treated seed as food source
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
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Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Same for all ERC

Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.015959
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.008583
 Grassland (mg/kg dwt): 0.008572
 Sewage Treatment Plant (mg/l): 0

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Same for all ERC

Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.015959
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.008583
 Grassland (mg/kg dwt): 0.008572
 Sewage Treatment Plant (mg/l): 0

Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Exposure assessment (environment): : Same for all ERC

Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.015959
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.008583
 Grassland (mg/kg dwt): 0.008572
 Sewage Treatment Plant (mg/l): 0

Exposure estimation and reference to its source - Environment: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Same for all ERC

Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.015959
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.008583
 Grassland (mg/kg dwt): 0.008572
 Sewage Treatment Plant (mg/l): 0

SILIPON RN6068

**ES 138 - Use as co-formulant in Plant Protection
Products for seed treatment - Professional - Sulfuric
acid, mono-C12-14-alkyl esters, sodium salts**

Exposure estimation and reference to its source - Workers: ECPA OWB

Exposure assessment (human): : Calculation tool used: ECPA OWB
Effects: Long term Systemic
PROC: Other: ECPA OWB

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³) : 1.25

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 139 - Exposure of re-entry workers following foliar application and bystanders via spray drift - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Exposure of re-entry workers following foliar application - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.

Environmental contributing scenarios :

Health Contributing scenarios : **ECPA OWB - PROC**

Number of the ES : 139
Industry Association : ECPA
Additional information : Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for:

Further specification : Environmental exposure is either not applicable or sufficiently covered by the Scenarios ES76 and ES77.

Contributing scenario controlling worker exposure for: ECPA OWB

Further specification : - PROC: Other: ECPA OWB

- Sub-scenario(s):

1- Exposure of re-entry workers following foliar application.

Workers re-entering treated cultures are potentially exposed to dislodgeable foliar residues (DFR). The only significant potential for worker exposure following re-entry will be contamination via the skin. Risk of inhalation exposure is negligible.

2- Exposure of bystanders via spray drift

The following definitions and assumptions for bystanders may be applied.

Bystanders are persons:

- who are located within or directly adjacent to the area where pesticide application or treatment is in process or has taken place
- whose presence is quite incidental and unrelated to work involving pesticides but whose position may put them at risk of exposure
- who take no action to avoid or control exposure
- that do not wear protective clothing and perhaps only light ordinary clothing

Physical state : - Sub-scenarios 1:
Solid (dried liquid spray)

Date of issue/Date of revision : ^(ES Revision date)

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Amounts used	: - Sub-scenario(s) 1: - Used amount of substance (as such or in preparation) per worker (workplace) per day: dislodgeable foliar residue (DFR)
Frequency and duration of use	: - Sub-scenario(s) 1: - Frequency of exposure at workplace (for one worker): 1-10 times per season (Operators may encounter the substance up to 10 time(s) per year) - Duration of exposure per day at workplace (for one worker): 8 hours per day
Human factors not influenced by risk management	: - Area of skin contact with the substance under conditions of use: 19,400 cm ² (whole body is potentially exposed) - Body weight: - Sub-scenario(s) 1: 70 kg (Default for workers) - Sub-scenario(s) 2: 60 kg (Default for general public)
Area of use:	: Outdoor use
Ventilation control measures	: - Ventilation Rate: Not applicable. (Outdoor use)
Product substance-related measures	: - Sub-scenario(s) 1: None
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment:

Exposure assessment (environment):	: Environmental exposure is either not applicable or sufficiently covered by the Scenarios ES76 and ES77.
Exposure estimation	: Not available.

Exposure estimation and reference to its source - Workers: ECPA OWB

Exposure assessment (human):	: Calculation tool used: ECPA OWB Effects: Long term Systemic PROC: Other: ECPA OWB - <u>Sub-scenarios</u> : 1- Exposure of re-entry workers following foliar application 2- Exposure of bystanders via spray drift
Exposure estimation	: <u>Dermal exposure</u> Exposure concentration (mg/kg bw/day): - Sub-scenario(s) 1: 1.143 - Sub-scenario(s) 2: 0.197 <u>Inhalation exposure</u> Exposure concentration (mg/m ³): - Sub-scenario(s) 1: Not relevant. - Sub-scenario(s) 2: 0.0152 <u>Oral exposure</u> Exposure concentration (mg/kg bw/day): - Sub-scenario(s) 2: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 139 - Exposure of re-entry workers following foliar application and bystanders via spray drift - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 140 - Wide dispersive Use of Solvents in Building Construction Adhesives for indoor application - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Solvents in Building Construction Adhesives for indoor application - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Process Category: PROC05, PROC08a, PROC10, PROC11

Substance supplied to that use in form of: In a mixture

Sector of end use: SU10

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC08c

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix** - ERC08c

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES : 140

Industry Association : FEICA

Additional information : Site 1 + 2

FEICA-P3.3, FEICAC3.3.2, FEICA-C3.3.3, FEICA-C3.3.1, FEICA-C4.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Further specification : Specific Environmental Release Category:
FEICA SPERC Code 8c.2a.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m³/d

Other given operational conditions affecting environmental exposure : 98% Release fraction to air from process.
1% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Date of issue/Date of revision : ^(ES Revision date)

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Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004368
 Freshwater sediments (mg/kg d.w.) : 0.015976
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002021
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 86.333
 Combined routes (mg/kg bw/day) :15.076

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 215.833
 Combined routes (mg/kg bw/day) : 33.576

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 5.486
 Inhalation exposure (mg/m³) : 215.833
 Combined routes (mg/kg bw/day) : 36.319

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 21.429
 Inhalation exposure (mg/m³) : 172.667
 Combined routes (mg/kg bw/day) : 46.095

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

SILIPON RN6068

***ES 140 - Wide dispersive Use of Solvents in Building
Construction Adhesives for indoor application -
Professional - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts***

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 141 - Wide dispersive Use of Solvents in Building Construction Adhesives for outdoor application - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Solvents in Building Construction Adhesives for outdoor application - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Process Category: PROC05, PROC08a, PROC10, PROC11

Substance supplied to that use in form of: In a mixture

Sector of end use: SU10

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC08f

Environmental contributing scenarios : **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix** - ERC08f

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES : 141

Industry Association : FEICA

Additional information : Site 1 + 2

FEICA-P4.2, FEICAC5.2.1, FEICA-C5.2.2, FEICA-C5.2.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Further specification : Specific Environmental Release Category:
FEICA SPERC Code 8f.2.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m³/d

Other given operational conditions affecting environmental exposure : 98% Release fraction to air from process.
1% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004368
 Freshwater sediments (mg/kg d.w.) : 0.015976
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002021
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 123.333
 Combined routes (mg/kg bw/day) : 20.362

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 185
 Combined routes (mg/kg bw/day) : 29.171

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 5.486
 Inhalation exposure (mg/m³) : 185
 Combined routes (mg/kg bw/day) : 31.914

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 21.429
 Inhalation exposure (mg/m³) : 246.667
 Combined routes (mg/kg bw/day) : 56.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

SILIPON RN6068

***ES 141 - Wide dispersive Use of Solvents in Building
Construction Adhesives for outdoor application -
Professional - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts***

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 142 - Wide dispersive Use of Solvents in Professional and DIY Adhesives - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Solvents in Professional and DIY Adhesives - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05, PROC08a, PROC10, PROC11
Substance supplied to that use in form of: In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix** - ERC08c

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES	: 142
Industry Association	: FEICA
Processes and activities covered by the exposure scenario	: Professional and Do it yourself products.
Additional information	: Site 1 + 2 FEICA-P3.4, FEICA-C3.4.2, FEICAC4.4, FEICA-C3.4.1, FEICA-C3.4.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: FEICA SPERC Code 8c.2b.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 98.5% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

606/934

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008989
Grassland (mg/kg dwt): 0.009354
Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day) :15.076

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 215.833
Combined routes (mg/kg bw/day) : 33.576

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 5.486
Inhalation exposure (mg/m³) : 215.833
Combined routes (mg/kg bw/day) : 36.319

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 21.429
Inhalation exposure (mg/m³) : 172.667
Combined routes (mg/kg bw/day) : 46.095

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 142 - Wide dispersive Use of Solvents in Professional and DIY Adhesives - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 143 - Wide dispersive Use of Substances other than Solvents in Building Construction Adhesives for indoor application - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Substances other than Solvents in Building Construction Adhesives for indoor application - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05, PROC08a, PROC10, PROC11
Substance supplied to that use in form of: In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix** - ERC08c

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES	: 143
Industry Association	: FEICA
Additional information	: Site 1 + 2 FEICA-P3.1, FEICA-C3.1.2, FEICA-C3.1.3, FEICA-C3.1.1, FEICAC4.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: FEICA SPERC Code 8c.1a.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 1.5% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.00437
	Freshwater sediments (mg/kg d.w.) : 0.015985
	Marine water (mg/l) : 0.000553
	Marine water sediments (mg/kg d.w.) : 0.002022
	Agricultural soil (mg/kg dwt): 0.008571
	Grassland (mg/kg dwt): 0.008571
	Sewage Treatment Plant (mg/l) : 0.000073

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 2.743
	Inhalation exposure (mg/m ³) : 86.333
	Combined routes (mg/kg bw/day) :15.076

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 2.743
	Inhalation exposure (mg/m ³) : 215.833
	Combined routes (mg/kg bw/day) : 33.576

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 5.486
	Inhalation exposure (mg/m ³) : 215.833
	Combined routes (mg/kg bw/day) : 36.319

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 21.429
	Inhalation exposure (mg/m ³) : 172.667
	Combined routes (mg/kg bw/day) : 46.095

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

SILIPON RN6068

ES 143 - Wide dispersive Use of Substances other than Solvents in Building Construction Adhesives for indoor application - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 144 - Wide dispersive Use of Substances other than Solvents in Building Construction Adhesives for outdoor application - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Substances other than Solvents in Building Construction Adhesives for outdoor application - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05, PROC08a, PROC10, PROC11
Substance supplied to that use in form of: In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08f

Environmental contributing scenarios : **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix** - ERC08f

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES	: 144
Industry Association	: FEICA
Additional information	: Site 1 + 2 FEICA-P4.1, FEICA-C5.1.1, FEICA-C5.1.2, FEICA-C5.1.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: FEICA SPERC Code 8f.1.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m ³ /d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 1.5% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Date of issue/Date of revision : ^(ES Revision date)

614/934

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.00437
	Freshwater sediments (mg/kg d.w.) : 0.015985
	Marine water (mg/l) : 0.000553
	Marine water sediments (mg/kg d.w.) : 0.002022
	Agricultural soil (mg/kg dwt): 0.008571
	Grassland (mg/kg dwt): 0.008571
	Sewage Treatment Plant (mg/l) : 0.000073

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 2.743
	Inhalation exposure (mg/m ³) : 123.333
	Combined routes (mg/kg bw/day) : 20.362

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 2.743
	Inhalation exposure (mg/m ³) : 185
	Combined routes (mg/kg bw/day) : 29.171

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 5.486
	Inhalation exposure (mg/m ³) : 185
	Combined routes (mg/kg bw/day) : 31.914

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 21.429
	Inhalation exposure (mg/m ³) : 246.667
	Combined routes (mg/kg bw/day) : 56.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

SILIPON RN6068

ES 144 - Wide dispersive Use of Substances other than Solvents in Building Construction Adhesives for outdoor application - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 145 - Wide dispersive Use of Substances other than Solvents in Professional and DIY Adhesives - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Substances other than Solvents in Professional and DIY Adhesives - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC05, PROC08a, PROC10, PROC11
Substance supplied to that use in form of: In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix** - ERC08c

Health Contributing scenarios : **PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)** - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES	: 145
Industry Association	: FEICA
Processes and activities covered by the exposure scenario	: Professional and Do it yourself products.
Additional information	: Site 1 + 2 FEICA-P3.2, FEICA-C4.2, FEICA-C3.2.3, FEICA-C3.2.1, FEICA-C3.2.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Further specification	: Specific Environmental Release Category: FEICA SPERC Code 8c.1b.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.9% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

618/934

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004367
 Freshwater sediments (mg/kg d.w.) : 0.015975
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002021
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000044

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 86.333
 Combined routes (mg/kg bw/day) :15.076

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 215.833
 Combined routes (mg/kg bw/day) : 33.576

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 5.486
 Inhalation exposure (mg/m³) : 215.833
 Combined routes (mg/kg bw/day) : 36.319

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 21.429
 Inhalation exposure (mg/m³) : 172.667
 Combined routes (mg/kg bw/day) : 46.095

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 145 - Wide dispersive Use of Substances other than Solvents in Professional and DIY Adhesives - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 146 - General professional use of lubricants and greases in vehicles or machinery (Indoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** General professional use of lubricants and greases in vehicles or machinery - Indoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC08a, PROC08b, PROC20
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09a
Market sector by type of chemical product: PC17, PC24, PC25, PC26, PC27, PC28, PC29

Environmental contributing scenarios : **ERC09a: Wide dispersive indoor use of substances in closed systems - ERC09a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems - PROC20

Number of the ES	: 146
Industry Association	: ATIEL/ATC
Processes and activities covered by the exposure scenario	: Includes filling and draining of containers and enclosed machinery (including engines)
Additional information	: Site 1 + 2 ATIEL-Group_BP1.2.1.1, ATIEL-Group_BP1.3.1.1, ATIEL-Group_BP1.2.1.3, ATIELGroup_BP1.3.1.2, ATIEL-Group_BP1.2.1.2, ATIEL-Group_BP1.1.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC09a: Wide dispersive indoor use of substances in closed systems

Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 5% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

622/934

SILIPON RN6068	ES 146 - General professional use of lubricants and greases in vehicles or machinery (Indoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure	
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Indoor
Ventilation control measures	: Ventilation Rate: 40%
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems	
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC09a: Wide dispersive indoor use of substances in closed systems	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004363 Freshwater sediments (mg/kg d.w.) : 0.015959 Marine water (mg/l) : 0.000552 Marine water sediments (mg/kg d.w.) : 0.002019 Agricultural soil (mg/kg dwt): 0.008989 Grassland (mg/kg dwt): 0.009354 Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.123333
Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 185
Combined routes (mg/kg bw/day): 40.143

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 24.476

Exposure estimation and reference to its source - Workers: PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.714
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 10.524

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 147 - General professional use of lubricants and greases in vehicles or machinery (Outdoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** General professional use of lubricants and greases in vehicles or machinery - Outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC08a, PROC08b, PROC20
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09b
Market sector by type of chemical product: PC17, PC24, PC25, PC26, PC27, PC28, PC29

Environmental contributing scenarios : **ERC09b: Wide dispersive outdoor use of substances in closed systems - ERC09b**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems - PROC20

Number of the ES	: 147
Industry Association	: ATIEL/ATC
Processes and activities covered by the exposure scenario	: Includes filling and draining of containers and enclosed machinery (including engines)
Additional information	: Site 1 + 2 ATIEL-Group_BP1.1.2, ATIEL-Group_BP1.2.2.3, ATIEL-Group_BP1.2.2.2, ATIEL-Group_BP1.2.2.1, ATIEL-Group_BP1.3.2.2, ATIEL-Group_BP1.3.2.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC09b: Wide dispersive outdoor use of substances in closed systems**

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m³/d

Other given operational conditions affecting environmental exposure : 5% Release fraction to air from process.
5% Release fraction to surface water from process.
5% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

625/934

SILIPON RN6068	ES 147 - General professional use of lubricants and greases in vehicles or machinery (Outdoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure	
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems	
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC09b: Wide dispersive outdoor use of substances in closed systems	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004387 Freshwater sediments (mg/kg d.w.) : 0.016048 Marine water (mg/l) : 0.000554 Marine water sediments (mg/kg d.w.) : 0.002028 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.000244

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.086333
Combined routes (mg/kg bw/day): 0.35519

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 215.833
Combined routes (mg/kg bw/day): 44.548

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 19.19

Exposure estimation and reference to its source - Workers: PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.714
Inhalation exposure (mg/m³) : 43.167
Combined routes (mg/kg bw/day): 7.881

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 148 - Handling (Non-Reactive Processing Aids) - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Handling (Non-Reactive Processing Aids) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC20, PC23, PC24, PC32, PC34

Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities** - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES : 148

Industry Association : TEGEWA

Additional information : Site 1 + 2

TEGEWA-F3.1, TEGEWA-T3.2, TEGEWA-L2.3, TEGEWA-L2.1, TEGEWA-T3.1, TEGEWA-L2.2, TEGEWA-T3.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Amounts used : 1 Tonnes/year

Frequency and duration of use : Release times per year: 20

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
100% Release fraction to surface water from process.
5% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**Further specification** : Same for all PROC**Frequency and duration of use** : Duration of activity: 240 min/day**Other given operational conditions affecting workers exposure** : Indoor**Ventilation control measures** : Ventilation Rate: 40% (Ventilation rate with closed doors and windows and no active ventilation.)**Conditions and measures related to personal protection and hygiene****Personal protection** : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities****Further specification** : Same for all PROC**Frequency and duration of use** : Duration of activity: 240 min/day**Other given operational conditions affecting workers exposure** : Indoor**Conditions and measures related to personal protection and hygiene****Personal protection** : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).**Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)****Further specification** : Same for all PROC**Frequency and duration of use** : Duration of activity: 240 min/day**Other given operational conditions affecting workers exposure** : Indoor**Conditions and measures related to personal protection and hygiene****Personal protection** : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).**Section 3 - Exposure estimation and reference to its source****Website:** : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles****Exposure assessment (environment):** : Calculation tool used: EasyTRA 2.0.**Exposure estimation** : Predicted Environmental Concentration :
Freshwater (mg/l) 0.048845
Freshwater sediments (mg/kg d.w.) : 0.178662
Marine water (mg/l) : 0.005
Marine water sediments (mg/kg d.w.) : 0.001829
Agricultural soil (mg/kg dwt): 0.009197
Grassland (mg/kg dwt): 0.000864
Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 92.5
Combined routes (mg/kg bw/day): 15.957

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 10.181

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 10.181

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 149 - Laboratory Use - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Laboratory Use - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC15
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC21
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios : **PROC15: Use as laboratory reagent - PROC15**

Number of the ES	: 149
Additional information	: Site 1 + 2
	AISE-P1200

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1
Amounts used : 1 000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 0%
Release fraction to water from process: 100%
Release fraction to soil from process: 0%
Fraction used at main source: 0.075%
Fraction tonnage to region: 10%
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification	: Laboratory Reagents
Frequency and duration of use	: Duration of activity: 15 min/day
Other given operational conditions affecting workers exposure	: Indoor
Technical conditions and measures to control dispersion from source towards the worker	: Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
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Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004546 Freshwater sediments (mg/kg d.w.) : 0.16627 Marine water (mg/l) : 0.00057 Marine water sediments (mg/kg d.w.) : 0.002086 Agricultural soil (mg/kg dwt): 0.008573 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.034286 Inhalation exposure (mg/m ³) : 0.385417 Combined routes (mg/kg bw/day): 0.089345

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 150 - Manufacturing / Formulation of Fertilizers - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Manufacturing / Formulation of Fertilisers. - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC03, PROC05, PROC08b, PROC09, PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: Not applicable.

Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure** - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 150
Additional information	: Site 1 + 2
	Fe2.1.3, Fe2.1.1, Fe3.1.1, Fe2.5.1, Fe2.5.2, Fe2.1.2, Fe2.6, Fe3.4, Fe2.2, Fe3.3, Fe2.3, Fe2.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC02: Formulation of preparations*

Amounts used	: 500 Tonnes/year
Frequency and duration of use	: Release times per year: 100
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 2.5% Release fraction to water from process: 2% Release fraction to soil from process: 0.01% Fraction used at main source: 100% Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification : Solid Fertilizers NPK/PK/NP/Straights/Phosphate Fertiliser./potassium Fertiliser.: Blending of fertilizer and other compounds as compost and substrates and pesticides

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Solid Fertilizers NPK/PK/NP/Straights/Phosphate Fertiliser./potassium Fertiliser.: Blending of fertilizer and other compounds as compost and substrates and pesticides

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Further specification : - Sub-scenario(s):

- 1- Solid Fertilizers NPK/PK/NP/Straights/Phosphate Fertiliser./potassium Fertiliser.: Blending of fertilizer and other compounds as compost and substrates and pesticides
- 2- Soluble liquid or solid fertilizer or suspension fertilizer: Dilution or suspension

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Transfer loading/unloading of liquid and solid fertilizers: Loading / unloading

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : - Sub-scenario(s):

1- Transfer loading/unloading of liquid and solid fertilizers: Loading / unloading
2- Solid Fertilizers NPK/PK/NP/Straights/Phosphate Fertiliser./potassium Fertiliser.:
Packaging of fertilizer

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Further specification : Seed treatment: Treating or coating of seed with Fertilizer

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009985
Grassland (mg/kg dwt): 0.00902
Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 10.181

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 37
Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 24.476

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 24.476

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 151 - Processing of formulated polymers - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Processing of formulated polymers - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC06, PROC08a, PROC08b, PROC14, PROC21
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC06: Calendering operations - PROC06
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14
PROC21: Low energy manipulation of substances bound in materials and/or articles - PROC21

Number of the ES	: 151
Processes and activities covered by the exposure scenario	: Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance.
Additional information	: Site 1 + 2 CONCAWE23B.4, CONCAWE23B.5, CONCAWE23B.8, CONCAWE23B.10, CONCAWE23B.7, CONCAWE23B.12, CONCAWE23B.6, CONCAWE23B.3, CONCAWE23B.14, CONCAWE23B.11, CONCAWE23B.1, CONCAWE23B.13, CONCAWE23B.9, CONCAWE23B.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 8.21b.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.

Date of issue/Date of revision : ^(ES Revision date)

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Other given operational conditions affecting environmental exposure	: 98% Release fraction to air from process. 1% Release fraction to surface water from process. 1% Release fraction to soil from process. 0.05% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC06: Calendering operations

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours

SILIPON RN6068	ES 151 - Processing of formulated polymers - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation	
Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC21: Low energy manipulation of substances bound in materials and/or articles	
Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004364 Freshwater sediments (mg/kg d.w.) : 0.015963 Marine water (mg/l) : 0.000552 Marine water sediments (mg/kg d.w.) : 0.00202 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.000012

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations
respectively [Indoor; Outdoor]:

Dermal exposure (mg/kg bw/day): [0.342857; 0.342857]

Inhalation exposure (mg/m³) : [0.123333; 0.086333]

Combined routes (mg/kg bw/day): [0.360476; 0.35519]

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations
respectively [Indoor; Outdoor]:

Dermal exposure (mg/kg bw/day): [1.371; 1.371]

Inhalation exposure (mg/m³) : [61.667; 43.167]

Combined routes (mg/kg bw/day): [10.181; 7.538]

Exposure estimation and reference to its source - Workers: PROC06: Calendering operations

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations
respectively [Indoor; Outdoor]:

Dermal exposure (mg/kg bw/day): [27.429; 27.429]

Inhalation exposure (mg/m³) : [123.333; 86.333]

Combined routes (mg/kg bw/day): [45.048; 39.762]

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations
respectively [Indoor; Outdoor]:

Dermal exposure (mg/kg bw/day): [13.714; 13.714]

Inhalation exposure (mg/m³) : [61.667; 215.833]

Combined routes (mg/kg bw/day): [22.524; 44.548]

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations
respectively [Indoor; Outdoor]:

Dermal exposure (mg/kg bw/day): [6.857; 6.857]

Inhalation exposure (mg/m³) : [123.333; 86.333]

Combined routes (mg/kg bw/day): [24.476; 19.19]

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations
respectively [Indoor; Outdoor]:
Dermal exposure (mg/kg bw/day): [3.429; 3.429]
Inhalation exposure (mg/m³) : [123.333; 86.333]
Combined routes (mg/kg bw/day): [21.048; 15.762]

Exposure estimation and reference to its source - Workers: PROC21: Low energy manipulation of substances bound in materials and/or articles

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations
respectively [Indoor; Outdoor]:
Dermal exposure (mg/kg bw/day): [2.829; 2.829]
Inhalation exposure (mg/m³) : Not applicable.
Combined routes (mg/kg bw/day): [2.829; 2.829]

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 152 - Professional Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC10, PROC11, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC24

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 152
Processes and activities covered by the exposure scenario	: Professional Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways
Additional information	: Site 1 + 2 ATIEL-Group_CP1.1.1, ATIEL-Group_CP1.5.1, ATIELGroup_CP1.2.1, ATIEL-Group_CP1.3.1, ATIEL-Group_CP1.4.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: 100% Release fraction to air from process. 100% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068	ES 152 - Professional Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Ventilation control measures	: Ventilation Rate: 40%
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing	
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Ventilation control measures	: Ventilation Rate: 40%
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying	
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring	
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.00485
 Freshwater sediments (mg/kg d.w.) : 0.017742
 Marine water (mg/l) : 0.000601
 Marine water sediments (mg/kg d.w.) : 0.002198
 Agricultural soil (mg/kg dwt): 0.008578
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 185
 Combined routes (mg/kg bw/day): 40.143

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 27.429
 Inhalation exposure (mg/m³) : 185
 Combined routes (mg/kg bw/day): 53.857

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 107.143
 Inhalation exposure (mg/m³) : 246.667
 Combined routes (mg/kg bw/day): 142.381

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 123.333
 Combined routes (mg/kg bw/day): 31.333

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 152 - Professional Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 153 - Professional Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat) - Outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC10, PROC11, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08d
Market sector by type of chemical product: PC24

Environmental contributing scenarios : **ERC08d: Wide dispersive outdoor use of processing aids in open systems - ERC08d**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 153
Processes and activities covered by the exposure scenario	: Professional Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways
Additional information	: Site 1 + 2 ATIEL-Group_CP1.3.2, ATIEL-Group_CP1.5.2, ATIELGroup_CP1.4.2, ATIEL-Group_CP1.2.2, ATIEL-Group_CP1.1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Further specification : Specific Environmental Release Category:
ECPA SPERC Code 8d.1.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d.

Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 0%
Release fraction to water from process: 0%
Release fraction to soil from process: 100%
Fraction used at main source: 0.2%
Fraction tonnage to region: 10%

Date of issue/Date of revision : ^(ES Revision date)

646/934

SILIPON RN6068	ES 153 - Professional Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat) - Outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Outdoor
Ventilation control measures	: Ventilation Rate: 40%
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing	
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Outdoor
Ventilation control measures	: Ventilation Rate: 40%
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying	
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring	
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.00485 Freshwater sediments (mg/kg d.w.) : 0.017742 Marine water (mg/l) : 0.000601 Marine water sediments (mg/kg d.w.) : 0.002198 Agricultural soil (mg/kg dwt): 0.008578 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.004875
Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³) : 215.833 Combined routes (mg/kg bw/day): 44.548
Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 27.429 Inhalation exposure (mg/m ³) : 215.833 Combined routes (mg/kg bw/day): 58.262
Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 107.143 Inhalation exposure (mg/m ³) : 172.667 Combined routes (mg/kg bw/day): 131.81
Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³) : 86.333 Combined routes (mg/kg bw/day): 26.048

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 153 - Professional Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat) - Outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 154 - Professional Solvent use, Indoor (Processing Aid) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Solvent use, Indoor (Processing aid) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC10, PROC11, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES : 154
Additional information : Site 1 + 2
FEICA-P1.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Amounts used : 1 000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Ventilation control measures : Ventilation Rate: 40%

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Ventilation control measures : Ventilation Rate: 40%

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.00485
 Freshwater sediments (mg/kg d.w.) : 0.017742
 Marine water (mg/l) : 0.000601
 Marine water sediments (mg/kg d.w.) : 0.002198
 Agricultural soil (mg/kg dwt): 0.008578
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic
Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 185
 Combined routes (mg/kg bw/day) : 29.171

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic
Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 123.333
 Combined routes (mg/kg bw/day) : 18.99

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic
Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 5.486
 Inhalation exposure (mg/m³) : 185
 Combined routes (mg/kg bw/day) : 31.914

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 21.429
Inhalation exposure (mg/m³) : 246.667
Combined routes (mg/kg bw/day) : 56.667

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day) : 20.362

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 155 - Professional Solvent use, Outdoor (Processing Aid) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Solvent use, Outdoor (Processing aid) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC10, PROC11, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08d

Environmental contributing scenarios : **ERC08d: Wide dispersive outdoor use of processing aids in open systems - ERC08d**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 155
Additional information	: Site 1 + 2 FEICA-P2.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08d: Wide dispersive outdoor use of processing aids in open systems	
Further specification	: Specific Environmental Release Category: ECPA SPERC Code 8d.1.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 0% Release fraction to water from process: 0% Release fraction to soil from process: 100% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.00485
 Freshwater sediments (mg/kg d.w.) : 0.017742
 Marine water (mg/l) : 0.000601
 Marine water sediments (mg/kg d.w.) : 0.002198
 Agricultural soil (mg/kg dwt): 0.008578
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 215.833
 Combined routes (mg/kg bw/day) : 33.576

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 86.333
 Combined routes (mg/kg bw/day) : 13.705

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 5.486
 Inhalation exposure (mg/m³) : 215.833
 Combined routes (mg/kg bw/day) : 36.319

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 21.429
 Inhalation exposure (mg/m³) : 172.667
 Combined routes (mg/kg bw/day) : 46.095

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day) : 15.076

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 156 - Professional use of Dishwash products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use of Dishwash products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC10
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10

Number of the ES	: 156
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-P203.2, AISE-P201.1, AISE-P203.1, AISE-P204.2, AISE-P201.2, AISE-P204.1, AISE-P202.2, AISE-P202.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08a: Wide dispersive indoor use of processing aids in open systems**

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

658/934

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 1 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 5 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Sub-scenario(s):
1- Manual.
2- Semi-Automatic.

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Sub-scenario(s) - Duration of activity:
1- 8 min/day
2- 10 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 2 : Wear protective gloves: 80%, permeation breakthrough time of: < 15 minutes.

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 10 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: < 15 minutes.

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 480 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004546
Freshwater sediments (mg/kg d.w.) : 0.016627
Marine water (mg/l) : 0.00057
Marine water sediments (mg/kg d.w.) : 0.002086
Agricultural soil (mg/kg dwt): 0.008573
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.000257
Combined routes (mg/kg bw/day): 0.342894

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 0.642361
Combined routes (mg/kg bw/day): 1.463

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):
1- Manual.
2- Semi-Automatic.

Exposure estimation : Estimated Exposure Concentrations:
respectively [Manual; Semi-Automatic]
Dermal exposure (mg/kg bw/day): [13.714; 2.743]
Inhalation exposure (mg/m³) : [5.139; 6.424]
Combined routes (mg/kg bw/day): [14.448; 3.661]

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 2.569
Combined routes (mg/kg bw/day): 1.738

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 5.486
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 14.295

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 157 - Professional use of Façade/surface Cleaning Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use of Façade/surface Cleaning Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC11
Substance supplied to that use in form of: In a mixture, As such
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08d
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC08d: Wide dispersive outdoor use of processing aids in open systems - ERC08d**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC11: Non industrial spraying - PROC11

Number of the ES	: 157
Additional information	: Site 1 + 2 AISE-P901.1, AISE-P902.2, AISE-P902.1, AISE-P901.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08d: Wide dispersive outdoor use of processing aids in open systems	
Further specification	: Specific Environmental Release Category: ECPA SPERC Code 8d.1.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 0% Release fraction to water from process: 0% Release fraction to soil from process: 100% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity: 10 min/day

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: < 15 minutes

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Frequency and duration of use : Duration of activity: 480 min/day

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 90%

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.00485
Freshwater sediments (mg/kg d.w.) : 0.017742
Marine water (mg/l) : 0.000601
Marine water sediments (mg/kg d.w.) : 0.002198
Agricultural soil (mg/kg dwt): 0.008578
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 4.497
Combined routes (mg/kg bw/day) : 3.385

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 21.429
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day) : 33.762

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

**ES 157 - Professional use of Facade/surface Cleaning
Products - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts**

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 158 - Professional use of Fertilizers (Indoor, Open system) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional use of Fertilizers (Indoor Open System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08b
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08b
Market sector by type of chemical product: PC12

Environmental contributing scenarios : **ERC08b: Wide dispersive indoor use of reactive substances in open systems - ERC08b**

Health Contributing scenarios : **PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b**

Number of the ES	: 158
Additional information	: Site 1 + 2 Fe1.7

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08b: Wide dispersive indoor use of reactive substances in open systems

Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: 0.1% Release fraction to air from process. 2% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08b: Wide dispersive indoor use of reactive substances in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004373
 Freshwater sediments (mg/kg d.w.) : 0.015994
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002023
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000097

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 123.333
 Combined routes (mg/kg bw/day) : 24.476

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 159 - Professional use of Fertilizers (Outdoor, Closed system) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional use of Fertilizers (Outdoor closed System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09b
Market sector by type of chemical product: PC12

Environmental contributing scenarios : **ERC09b: Wide dispersive outdoor use of substances in closed systems - ERC09b**

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**

Number of the ES	: 159
Additional information	: Site 1 + 2 Fe1.9, Fe1.8

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC09b: Wide dispersive outdoor use of substances in closed systems	
Amounts used	: 50 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 5% Release fraction to water from process: 5% Release fraction to soil from process: 5% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day):: 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09b: Wide dispersive outdoor use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Compartment: Fresh water
PEC: 0.007338 mg/l

Compartment: Freshwater sediment
PEC: 0.027038 mg/kg dwt

Compartment: Marine water
PEC: 0.000823 mg/l

Compartment: Marine water sediment
PEC: 0.003033 mg/kg dwt

Compartment: Agricultural soil
PEC: 0.005533 mg/kg dwt

Compartment: Grassland
PEC: 0.005533 mg/kg dwt

Compartment: Sewage Treatment Plant
PEC: 0.000012 mg/l

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations respectively [Indoor; Outdoor]:
Dermal exposure (mg/kg bw/day): [1.371; 1.371]
Inhalation exposure (mg/m³): [61.667; 43.167]
Combined routes (mg/kg bw/day): [10.181; 7.538]

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

SILIPON RN6068

***ES 159 - Professional use of Fertilizers (Outdoor,
Closed system) - Sulfuric acid, mono-C12-14-alkyl
esters, sodium salts***

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 160 - Professional use of Fertilizers (Outdoor, Open system) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional use of Fertilizers (Outdoor Open System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08e
Market sector by type of chemical product: PC12

Environmental contributing scenarios : **ERC08e: Wide dispersive outdoor use of reactive substances in open systems** - ERC08e

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities** - PROC08a
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 160
Additional information	: Site 1 + 2 Fe1.1, Fe1.6, Fe1.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08e: Wide dispersive outdoor use of reactive substances in open systems	
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: 0.1% Release fraction to air from process. 2% Release fraction to surface water from process. 1% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 80%

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 80%

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08e: Wide dispersive outdoor use of reactive substances in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004373
 Freshwater sediments (mg/kg d.w.) : 0.015994
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002023
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000097

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 246.667
 Combined routes (mg/kg bw/day) : 48.952

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 123.333
 Combined routes (mg/kg bw/day) : 31.333

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 161 - Professional Use of Floor care products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use of Floor care products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC10, PROC11
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC31, PC35

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES : 161
Additional information : Site 1 + 2

AISE-P408, AISE-P409.1, AISE-P404.2, AISE-P401.1, AISE-P404.1, AISE-P403.1, AISE-P407, AISE-P410.1, AISE-P402.2, AISE-P409.2, AISE-P403.2, AISE-P401.2, AISE-P406, AISE-P405.1, AISE-P411, AISE-P402.1, AISE-P405.2, AISE-P410.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08a: Wide dispersive indoor use of processing aids in open systems**

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

673/934

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Sub-scenario(s):
 1- Carpet cleaners - Manual.
 2- Floor cleaner - Semi-Automatic
 3- Floor Stripper - Manual
 4- Floor cleaner - Manual
 5- Carpet cleaners - Semi-Automatic
 6- Floor Stripper - Semi-Automatic
 7- Floor cleaner - Manual - Outdoor
 8- Floor cleaner; Spray and Wipe - Manual

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Sub-scenario(s) - Duration of activity:
 1- 20 min/day
 2- 16 min/day
 3- 20 min/day
 4- 16 min/day
 5- 20 min/day
 6- 20 min/day
 7- 16 min/day
 8- 16 min/day

Area of use: : Sub-scenario(s) 7 : Outdoor
 Other sub-scenario(s): Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 3; 4; 6; 7; 8 : Wear protective gloves: 80%, permeation breakthrough time of: 15 - 60 minutes.

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further specification : Sub-scenario(s):
 1- Floor Stripper - Manual.
 2- Polish / Impregnating agent - Semi-Automatic
 3- Carpet cleaners - Manual
 4- Floor cleaner - Manual - Outdoor
 5- Floor cleaner - Semi-Automatic
 6- Polish / Impregnating agent - Manual
 7- Floor Stripper - Semi-Automatic
 8- Floor cleaner - Manual
 9- Carpet cleaners - Semi-Automatic

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Sub-scenario(s) - Duration of activity:
 1- 360 min/day
 2- 360 min/day
 3- 360 min/day
 4- 480 min/day
 5- 480 min/day
 6- 360 min/day
 7- 360 min/day
 8- 480 min/day
 9- 360 min/day

Area of use: : Sub-scenario(s) 4 : Outdoor
 Other sub-scenario(s): Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 4; 8 : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s).

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Further specification : Sub-scenario(s):
1- Polish / Impregnating agent; Spray and Wipe - Manual.
2- Floor cleaner ; Spray and Wipe - Manual
3- Carpet cleaners; Spray and Brush - Manual

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Sub-scenario(s) - Duration of activity:
1- 360 min/day
2- 480 min/day
3- 360 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 2 : Wear protective gloves: 80%, permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004546
Freshwater sediments (mg/kg d.w.) : 0.016627
Marine water (mg/l) : 0.00057
Marine water sediments (mg/kg d.w.) : 0.002086
Agricultural soil (mg/kg dwt): 0.008573
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):
1- Carpet cleaners - Manual.
2- Floor cleaner - Semi-Automatic
3- Floor Stripper - Manual
4- Floor cleaner - Manual
5- Carpet cleaners - Semi-Automatic
6- Floor Stripper - Semi-Automatic
7- Floor cleaner - Manual - Outdoor
8- Floor cleaner; Spray and Wipe - Manual

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 Sub-scenario(s) 1; 2; 5 : 13.714
 Sub-scenario(s) 3; 4; 6; 7; 8 : 2.743

Inhalation exposure (mg/m³) :
 Sub-scenario(s) 1; 3; 5; 6 : 12.847
 Sub-scenario(s) 2; 4; 8 : 10.278
 Sub-scenario(s) 7 : 7.194

Combined routes (mg/kg bw/day):
 Sub-scenario(s) 1; 5 : 15.55
 Sub-scenario(s) 2 : 15.183
 Sub-scenario(s) 3; 6 : 4.578
 Sub-scenario(s) 4; 8 : 4.211
 Sub-scenario(s) 7 : 3.771

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Sub-scenario(s):
 1- Floor Stripper - Manual.
 2- Polish / Impregnating agent - Semi-Automatic
 3- Carpet cleaners - Manual
 4- Floor cleaner - Manual - Outdoor
 5- Floor cleaner - Semi-Automatic
 6- Polish / Impregnating agent - Manual
 7- Floor Stripper - Semi-Automatic
 8- Floor cleaner - Manual
 9- Carpet cleaners - Semi-Automatic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 Sub-scenario(s) 1; 2; 3; 6; 7; 9 : 27.429
 Sub-scenario(s) 4; 8 : 5.486

Inhalation exposure (mg/m³) :
 Sub-scenario(s) 1; 2; 3; 6; 7; 9 : 231.25
 Sub-scenario(s) 4 : 215.833
 Sub-scenario(s) 5; 8 : 61.667

Combined routes (mg/kg bw/day):
 Sub-scenario(s) 1; 2; 3; 5; 6; 7; 9 : 60.464
 Sub-scenario(s) 4 : 36.319
 Sub-scenario(s) 5 : 36.238
 Sub-scenario(s) 8 : 14.295

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Sub-scenario(s):
 1- Polish / Impregnating agent; Spray and Wipe - Manual.
 2- Floor cleaner ; Spray and Wipe - Manual
 3- Carpet cleaners; Spray and Brush - Manual

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 Sub-scenario(s) 1; 3 : 107.143
 Sub-scenario(s) 2 : 21.429
 Inhalation exposure (mg/m³) :
 Sub-scenario(s) 1; 3 : 185
 Sub-scenario(s) 2 : 246.667
 Combined routes (mg/kg bw/day):
 Sub-scenario(s) 1; 3 : 133.571
 Sub-scenario(s) 2 : 56.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 162 - Professional Use of Food beverage and pharmacos products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use of Food beverage and pharmacos products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC10
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC10: Roller application or brushing - PROC10

Number of the ES	: 162
Additional information	: Site 1 + 2 AISE-P808.2, AISE-P808.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Further specification	: Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 100% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.075% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 16 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 480 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004546
Freshwater sediments (mg/kg d.w.) : 0.016627
Marine water (mg/l) : 0.00057
Marine water sediments (mg/kg d.w.) : 0.002086
Agricultural soil (mg/kg dwt): 0.008573
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 10.278
Combined routes (mg/kg bw/day) : 15.183

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day) : 36.238

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 163 - Professional Use of General surface cleaning products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use of General surface cleaning products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC10, PROC11, PROC13
Substance supplied to that use in form of: In a mixture, As such
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a**
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES : 163
Industry Association : AISE
Additional information : Site 1 + 2

AISE-P308.2, AISE-P306.2, AISE-P314.1, AISE-P305.2, AISE-P316.1, AISE-P304.1, AISE-P315.1, AISE-P307.2, AISE-P304.2, AISE-P303.2, AISE-P312.1, AISE-P313.2, AISE-P303.1, AISE-P301.1, AISE-P306.1, AISE-P305.1, AISE-P310, AISE-P302.2, AISE-P315.2, AISE-P314.2, AISE-P308.1, AISE-P313.1, AISE-P307.1, AISE-P309, AISE-P302.1, AISE-P316.2, AISE-P301.2, AISE-P317, AISE-P312.2, AISE-P311

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08a: Wide dispersive indoor use of processing aids in open systems**

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region

Date of issue/Date of revision : ^(ES Revision date)

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Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Sub-scenario(s):
 1- Descaling agents; Manual process
 2- Metalcleaner; Manual process
 3- General purpose Cleaner; Spray and Wipe Manual process
 4- Kitchen Cleaner; Manual process
 5- Surface Disinfectant; Spray and rinse process Manual process
 6- Surface Disinfectant; Manual process
 7- Descaling agents; Spray and rinse process Manual process
 8- Glass Cleaner; Spray and Wipe Manual process
 9- Kitchen Cleaner; Spray and Wipe Manual process
 10- General purpose Cleaner; Manual process
 11- Sanitary Cleaner; Spray and Wipe Manual process
 12- Sanitary Cleaner; Manual process
 13- Glass Cleaner; Manual process

Product characteristics : Substance is in preparations. (Inhalation) : 20%

Frequency and duration of use : Sub-scenario(s) - Duration of activity (min/day):
 1- 1
 2; 10; 12; 13 - 16
 3; 5; 6; 7; 8; 9; 11- 5
 4- 6

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 5; 6; 7 : Wear protective gloves: 80%, permeation breakthrough time of: < 15 minutes

Other Sub-scenario(s) : None.

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further specification : Sub-scenario(s):
 1- Glass Cleaner; Manual process
 2- Surface Disinfectant; Manual process
 3- Oven/Grill Cleaner; Manual process
 4- General purpose Cleaner; Manual process
 5- Sanitary Cleaner; Manual process
 6- Wet Wipe; Manual process
 7- Metalcleaner; Manual process
 8- Kitchen Cleaner; Manual process

Product characteristics : Substance is in preparations. (Inhalation) : 20%

Frequency and duration of use : Sub-scenario(s) - Duration of activity (min/day):
 1; 2; 4; 5; 6; 7; - 480
 3- 60
 8- 180

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 3 : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Further specification	: Sub-scenario(s): 1- Sanitary Cleaner; Spray and Wipe Manual process 2- Kitchen Cleaner; Spray and Wipe Manual process 3- Glass Cleaner; Spray and Wipe Manual process 4- Surface Disinfectant; Spray and rinse process Manual process 5- Descaling agents; Manual process 6- Descaling agents; Spray and rinse process Manual process 7- Oven/Grill Cleaner; Spray and Wipe Manual process 8- General purpose Cleaner; Spray and Wipe Manual process
Product characteristics	: Substance is in preparations. (Inhalation) : 20%
Frequency and duration of use	: Sub-scenario(s) - Duration of activity: 1; 3; 4; 6; 8- 8 min/day 2- 3 min/day 5; 7- 60 min/day
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Sub-scenario(s) 5; 7 : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s) Sub-scenario(s) 6 : Wear protective gloves: 80%, permeation breakthrough time of: < 15 minutes Other Sub-scenario(s) : None.

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Product characteristics	: Substance is in preparations. (Inhalation) : 20%
Frequency and duration of use	: Duration of activity: 60 min/day
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
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Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004546 Freshwater sediments (mg/kg d.w.) : 0.016627 Marine water (mg/l) : 0.00057 Marine water sediments (mg/kg d.w.) : 0.002086 Agricultural soil (mg/kg dwt): 0.008573 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):

- 1- Descaling agents; Manual process
- 2- Metalcleaner; Manual process
- 3- General purpose Cleaner; Spray and Wipe Manual process
- 4- Kitchen Cleaner; Manual process
- 5- Surface Disinfectant; Spray and rinse process Manual process
- 6- Surface Disinfectant; Manual process
- 7- Descaling agents; Spray and rinse process Manual process
- 8- Glass Cleaner; Spray and Wipe Manual process
- 9- Kitchen Cleaner; Spray and Wipe Manual process
- 10- General purpose Cleaner; Manual process
- 11- Sanitary Cleaner; Spray and Wipe Manual process
- 12- Sanitary Cleaner; Manual process
- 13- Glass Cleaner; Manual process

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 1; 2; 3; 4; 8; 9; 10; 11; 12; 13 - 13.714
 5; 6; 7- 2.743
 Inhalation exposure (mg/m³):
 1- 0.642361
 3; 5; 6; 7; 8; 9; 11 - 3.212
 4- 3.854
 2; 10; 12; 13; - 10.278
 Combined routes (mg/kg bw/day):
 1- 13.806
 3; 8 ; 9; 11 - 14.173
 2; 10; 12; 13 - 15.183
 4 - 14.265
 5; 6; 7- 3.202

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):

- 1- Glass Cleaner; Manual process
- 2- Surface Disinfectant; Manual process
- 3- Oven/Grill Cleaner; Manual process
- 4- General purpose Cleaner; Manual process
- 5- Sanitary Cleaner; Manual process
- 6- Wet Wipe; Manual process
- 7- Metalcleaner; Manual process
- 8- Kitchen Cleaner; Manual process

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 1; 2; 4; 5; 6; 7; 8- 27.429
 3- 5.486
 Inhalation exposure (mg/m³):
 1; 2; 4; 5; 6; 7- 61.667
 8 - 115.625
 3; 8 - 38.542
 Combined routes (mg/kg bw/day):
 1; 2; 4; 5; 6; 7- 36.238
 3- 10.992
 8- 43.946

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):

- 1- Sanitary Cleaner; Spray and Wipe Manual process
- 2- Kitchen Cleaner; Spray and Wipe Manual process
- 3- Glass Cleaner; Spray and Wipe Manual process
- 4- Surface Disinfectant; Spray and rinse process Manual process
- 5- Descaling agents; Manual process
- 6- Descaling agents; Spray and rinse process Manual process
- 7- Oven/Grill Cleaner; Spray and Wipe Manual process
- 8- General purpose Cleaner; Spray and Wipe Manual process

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day):
1; 2; 3; 4; 8 - 107.143
7 - 21.429
Inhalation exposure (mg/m³):
1; 3; 4; 6; 8- 20.556
2- 7.708
5; 7- 154.167
Combined routes (mg/kg bw/day):
1; 3; 4; 8 - 110.079
2- 108.244
5; 7 - 43.452
6- 24.365

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 15.417
Combined routes (mg/kg bw/day): 4.945

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 164 - Professional Use of Hand Cleaners - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Professional Use of Hand Cleaners - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC19
Substance supplied to that use in form of: In a mixture, As such
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC39
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios : **PROC19: Hand-mixing with intimate contact and only PPE available - PROC19**

Number of the ES : 164
Additional information : Site 1 + 2
AISE-P1300

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1
Amounts used : 1 000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC19: Hand-mixing with intimate contact and only PPE available

Frequency and duration of use : Duration of activity: 40 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004546
 Freshwater sediments (mg/kg d.w.) : 0.016627
 Marine water (mg/l) : 0.00057
 Marine water sediments (mg/kg d.w.) : 0.002086
 Agricultural soil (mg/kg dwt): 0.008573
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC19: Hand-mixing with intimate contact and only PPE available

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 141.429
 Inhalation exposure (mg/m³) : 25.694
 Combined routes (mg/kg bw/day) : 145.099

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 165 - Professional Use of Laundry Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use of Laundry products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC08a, PROC11
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC11: Non industrial spraying - PROC11

Number of the ES	: 165
Industry Association	: AISE
Additional information	: Site 1 + 2
	AISE-P105.1, AISE-P112.2, AISE-P103.2, AISE-P102.2, AISE-P102.1, AISE-P113, AISE-P112.1, AISE-P111.2, AISE-P105.2, AISE-P103.1, AISE-P106.1, AISE-P111.1, AISE-P106.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Further specification	: Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 100% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.075% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

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SILIPON RN6068	ES 165 - Professional Use of Laundry Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure	
Frequency and duration of use	: Duration of activity: 1 min/day
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Further specification	: <u>Sub-scenario(s)</u> : 1- Conditioners. Semi-Automatic 2- Laundry Detergent; Semi-Automatic 3- Laundry Aid (non-gasing); Manual process 4- Laundry Detergent; Manual process 5- Conditioners. Manual process 6- Laundry Aid (non-gasing); Semi-Automatic
Frequency and duration of use	: <u>Sub-scenario(s) - Duration of activity</u> : 1; 2; 6 - 15 min/day 3; 4; 5 - 20 min/day
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 15 - 60 minutes
Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying	
Frequency and duration of use	: Duration of activity: 50 min/day
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004546 Freshwater sediments (mg/kg d.w.) : 0.016627 Marine water (mg/l) : 0.00057 Marine water sediments (mg/kg d.w.) : 0.002086 Agricultural soil (mg/kg dwt): 0.008573 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.000257
Combined routes (mg/kg bw/day): 0.342894

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Sub-scenario(s):
1- Conditioners. Semi-Automatic
2- Laundry Detergent; Semi-Automatic
3- Laundry Aid (non-gasing); Manual process
4- Laundry Detergent; Manual process
5- Conditioners. Manual process
6- Laundry Aid (non-gasing); Semi-Automatic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day):
1; 2; 3; 4; 5; 6 - 2.743
Inhalation exposure (mg/m³):
1; 2; 6- 9.635
3; 4; 5- 12.847
Combined routes (mg/kg bw/day):
1; 2; 6- 4.119
3; 4; 5 - 4.578

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 16.071
Inhalation exposure (mg/m³): 128.472
Combined routes (mg/kg bw/day): 125.496

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 166 - Professional Use of Laundry Products (Reactive) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Professional Use of Laundry products (reactive) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC08a
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08b
Market sector by type of chemical product: PC35
Environmental contributing scenarios : **ERC08b: Wide dispersive indoor use of reactive substances in open systems - ERC08b**
Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a

Number of the ES	: 166
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-P109.2, AISE-P109.1, AISE-P108.2, AISE-P108.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08b: Wide dispersive indoor use of reactive substances in open systems

Further specification	: Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 100% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.075% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Date of issue/Date of revision : ^(ES Revision date)

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Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Frequency and duration of use : Duration of activity: 1 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Frequency and duration of use : Duration of activity: 20 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 15 - 60 minutes

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC08b: Wide dispersive indoor use of reactive substances in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004546
Freshwater sediments (mg/kg d.w.) : 0.016627
Marine water (mg/l) : 0.00057
Marine water sediments (mg/kg d.w.) : 0.002086
Agricultural soil (mg/kg dwt): 0.008573
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.000257
Combined routes (mg/kg bw/day): 0.342894

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³): 12.847
Combined routes (mg/kg bw/day): 4.578

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

**ES 166 - Professional Use of Laundry Products
(Reactive) - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts**

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 167 - Professional Use of Maintenance Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use of Maintenance Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC02, PROC08a, PROC10, PROC11
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC31, PC35

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02**
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES	: 167
Industry Association	: AISE
Additional information	: Site 1 + 2
	AISE-P609, AISE-P605.2, AISE-P602, AISE-P601, AISE-P607, AISE-P606, AISE-P604, AISE-P605.1, AISE-P608, AISE-P603

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

694/934

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Frequency and duration of use : Duration of activity: 5 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Sub-scenario(s):
1- Drain Products; Manual process
2- Drain unblocker; Manual process
3- Leather Care Products; Automatic Process

Frequency and duration of use : Sub-scenario(s) - Duration of activity:
1- 6 min/day
2- 6 min/day
3- 1 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 2 : Wear protective gloves: 80%, permeation breakthrough time of: < 15 minutes

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further specification : Sub-scenario(s):
1- Furniture care product; Manual process
2- Stainless steel care; Manual process
3- Leather Care Products; Manual process

Frequency and duration of use : Sub-scenario(s) - Duration of activity:
1- 90 min/day
2- 180 min/day
3- 90 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 3 : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Further specification : Sub-scenario(s):
1- Stainless steel care; Spray and Wipe Manual process
2- Furniture care product; Spray and Wipe Manual process
3- Leather Care Products - Spray and Wipe Manual process

Frequency and duration of use : Sub-scenario(s) - Duration of activity:
1- 50 min/day
2- 90 min/day
3- 90 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004546
 Freshwater sediments (mg/kg d.w.) : 0.016627
 Marine water (mg/l) : 0.00057
 Marine water sediments (mg/kg d.w.) : 0.002086
 Agricultural soil (mg/kg dwt): 0.008573
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 0.642361
 Combined routes (mg/kg bw/day): 1.463

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Sub-scenario(s):
 1- Drain Products; Manual process
 2- Drain unblocker; Manual process
 3- Leather Care Products; Automatic Process

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 1; 3 - 13.714
 2- 2.743
 Inhalation exposure (mg/m³):
 1; 2 - 3.854
 3 - 0.642361
 Combined routes (mg/kg bw/day):
 1 - 14.265
 2 - 3.854
 3 - 13.806

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Sub-scenario(s):
 1- Furniture care product; Manual process
 2- Stainless steel care; Manual process
 3- Leather Care Products; Manual process

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 1; 2; 3 - 27.429
 Inhalation exposure (mg/m³):
 1; 3 - 57.812
 2 - 115.625
 Combined routes (mg/kg bw/day):
 1; 3 - 35.688
 2 - 43.946

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Sub-scenario(s):

- 1- Stainless steel care; Spray and Wipe Manual process
- 2- Furniture care product; Spray and Wipe Manual process
- 3- Leather Care Products - Spray and Wipe Manual process

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 1; 2; 3- 107.143
 Inhalation exposure (mg/m³):
 1 - 128.472
 2; 3 - 231.25
 Combined routes (mg/kg bw/day):
 1 - 125.496
 2; 3 - 140.179

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 168 - Professional Use of Medical Devices - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Professional Use of Medical Devices - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC10, PROC11, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 168
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-P1103.2, AISE-P1104.1, AISE-P1102.2, AISE-P1104.2, AISE-P1102.1, AISE-P1103.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Further specification	: Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 100% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.075% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

698/934

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Sub-scenario(s):

- 1- Spraying
- 2- Dipping process
- 3- Manual process

Product characteristics : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Sub-scenario(s) - Duration of activity (min/day):

- 1- 5
- 2- 5
- 3- 16

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Sub-scenario(s) 2 : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Sub-scenario(s) 2 : Wear protective gloves: 80%, permeation breakthrough time of: < 15 minutes

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Product characteristics : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 480 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Product characteristics : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 8 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Product characteristics : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 150 min/day

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s)

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE/>
 AISE:
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004546
 Freshwater sediments (mg/kg d.w.) : 0.016627
 Marine water (mg/l) : 0.00057
 Marine water sediments (mg/kg d.w.) : 0.002086
 Agricultural soil (mg/kg dwt): 0.008573
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Sub-scenario(s):
 1- Spraying
 2- Dipping process
 3- Manual process

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 1; 3 - 13.714
 2 - 0.027429
 Inhalation exposure (mg/m³):
 1- 3.212
 2- 0.642361
 3- 10.278
 Combined routes (mg/kg bw/day):
 1- 14.173
 2- 0.119194
 3- 15.183

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 27.429
 Inhalation exposure (mg/m³): 61.667
 Combined routes (mg/kg bw/day): 36.238

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 35.357
 Inhalation exposure (mg/m³): 20.556
 Combined routes (mg/kg bw/day): 110.079

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.137143
Inhalation exposure (mg/m³) : 7.708
Combined routes (mg/kg bw/day): 1.238

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 169 - Professional Use of Vehicle cleaning Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use of Vehicle cleaning Products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC04, PROC08a, PROC10, PROC11
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04**
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES	: 169
Industry Association	: AISE
Additional information	: Site 1 + 2
	AISE-P701.1, AISE-P702.2, AISE-P706.2, AISE-P705.1, AISE-P701.2, AISE-P703.1, AISE-P704.1, AISE-P704.2, AISE-P702.1, AISE-P705.2, AISE-P703.2, AISE-P706.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

702/934

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification : Sub-scenario(s):
 1- Car wash product - Semi-Automatic Indoor
 2- Car wash product - Semi-Automatic Outdoor
 3- Dewaxing product - Semi-Automatic Indoor
 4- Dewaxing product - Semi-Automatic Outdoor

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 480 min/day

Area of use: : Sub-scenario(s):
 1- Indoor
 2- Outdoor
 3- Indoor
 4- Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s)

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Sub-scenario(s):
 1- Car wash product - Semi-Automatic Indoor
 2- Boat cleaner - Manual process Outdoor
 3- Car wash product - Spray and Wipe Manual process Outdoor
 4- Dewaxing product - Semi-Automatic Indoor
 5- Car wash product - Spray and rinse process Outdoor
 6- Car wash product - Spray and rinse process Indoor
 7- Dewaxing product - Semi-Automatic Outdoor
 8- Boat cleaner - Spray and Wipe Manual process Outdoor
 9- Car wash product - Semi-Automatic Outdoor

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity: 30 min/day

Area of use: : Sub-scenario(s):
 1- Indoor
 2- Outdoor
 3- Outdoor
 4- Indoor
 5- Outdoor
 6- Indoor
 7- Outdoor
 8- Outdoor
 9- Outdoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 15 - 60 minutes

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further specification	: Boat cleaner - Manual process Outdoor
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity: 480 min/day
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s)

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Further specification	: <u>Sub-scenario(s)</u> : 1- Car wash product - Spray and rinse process Indoor 2- Car wash product - Spray and rinse process Outdoor 3- Car wash product - Spray and Wipe Manual process Outdoor 4- Boat cleaner - Spray and Wipe Manual process
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity: 480 min/day
Area of use:	: <u>Sub-scenario(s)</u> : 1- Indoor 2- Outdoor 3- Outdoor 4- Outdoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: > 4 hour(s)

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE: http://www.aise.eu/reach/?page=exposureass_sub4 http://www.aise.eu/reach/?page=exposureass_sub2
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Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004546 Freshwater sediments (mg/kg d.w.) : 0.016627 Marine water (mg/l) : 0.00057 Marine water sediments (mg/kg d.w.) : 0.002086 Agricultural soil (mg/kg dwt): 0.008573 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):

- 1- Car wash product - Semi-Automatic Indoor
- 2- Car wash product - Semi-Automatic Outdoor
- 3- Dewaxing product - Semi-Automatic Indoor
- 4- Dewaxing product - Semi-Automatic Outdoor

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³):
Sub-scenario(s) Indoor- 123.333
Sub-scenario(s) Outdoor- 86.333
Combined routes (mg/kg bw/day):
Sub-scenario(s) Indoor- 18.99
Sub-scenario(s) Outdoor- 13.705

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):

- 1- Car wash product - Semi-Automatic Indoor
- 2- Boat cleaner - Manual process Outdoor
- 3- Car wash product - Spray and Wipe Manual process Outdoor
- 4- Dewaxing product - Semi-Automatic Indoor
- 5- Car wash product - Spray and rinse process Outdoor
- 6- Car wash product - Spray and rinse process Indoor
- 7- Dewaxing product - Semi-Automatic Outdoor
- 8- Boat cleaner - Spray and Wipe Manual process Outdoor
- 9- Car wash product - Semi-Automatic Outdoor

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³):
Sub-scenario(s) 1; 4; 6: Indoor - 19.271
Sub-scenario(s) 2; 3; 5; 7; 8; 9: Outdoor- 13.49
Combined routes (mg/kg bw/day):
Sub-scenario(s) Indoor- 5.496
Sub-scenario(s) Outdoor- 4.67

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 5.486
Inhalation exposure (mg/m³): 215.833
Combined routes (mg/kg bw/day): 36.319

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Sub-scenario(s):

- 1- Car wash product - Spray and rinse process Indoor
- 2- Car wash product - Spray and rinse process Outdoor
- 3- Car wash product - Spray and Wipe Manual process Outdoor
- 4- Boat cleaner - Spray and Wipe Manual process Outdoor

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 21.429
Inhalation exposure (mg/m³):
1- 246.667
2; 3; 4 - 172.667
Combined routes (mg/kg bw/day):
1- 56.667
2; 3; 4 - 46.095

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 170 - Professional Use of lubricants in high energy open processes - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Professional Use of lubricants in high energy open processes - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC17
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC24, PC25
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC17: Lubrication at high energy conditions and in partly open process - PROC17

Number of the ES	: 170
Industry Association	: ATIEL-Group
Processes and activities covered by the exposure scenario	: Use of lubricants in high energy open processes e.g. in high speed machinery such as metal rolling / forming or metalworking fluids for machining and grinding.
Additional information	: Site 1 + 2 ATIELGroup_FP1.1, ATIEL-Group_FP1.2, ATIEL-Group_FP1.6, ATIEL-Group_FP1.4, ATIEL-Group_FP1.3, ATIEL-Group_FP1.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 100% Release fraction to water from process: 100% Release fraction to soil from process: 0% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day):: 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Sub-scenario(s):
1- Fill bath with fluid
2- Draining, maintenance and cleaning of equipment
3- Treat and dispose spent fluid

Product characteristics : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Ventilation control measures : Ventilation Rate: 40%

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process**

Further specification : Sub-scenario(s):
1- Remove finished object from machine
2- Use of high speed machinery (not MWF uses) - open systems giving rise to mist
3- Drilling, grinding,...

Product characteristics : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.00485
Freshwater sediments (mg/kg d.w.) : 0.017742
Marine water (mg/l) : 0.000601
Marine water sediments (mg/kg d.w.) : 0.002198
Agricultural soil (mg/kg dwt): 0.008578
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³): 185
Combined routes (mg/kg bw/day): 40.143

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³): 123.333
Combined routes (mg/kg bw/day): 45.048

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 171 - Professional oil field well drilling and production operations - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional oil field well drilling and production operations - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08d

Environmental contributing scenarios : **ERC08d: Wide dispersive outdoor use of processing aids in open systems - ERC08d**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b

Number of the ES	: 171
Industry Association	: Concawe
Processes and activities covered by the exposure scenario	: (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance
Additional information	: Site 1 + 2 CONCAWE5B.6, CONCAWE5B.4, CONCAWE5B.2, CONCAWE5B.3, CONCAWE5B.5, CONCAWE5B.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08d: Wide dispersive outdoor use of processing aids in open systems**

Further specification : Specific Environmental Release Category:
ESVOC SPERC Code 8.15.v1

Amounts used : 400 Tonnes/year

Frequency and duration of use : Release times per year: 30

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure	: 0.01% Release fraction to air from process. 7% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Outdoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Outdoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Outdoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Further specification	: Same for all PROC
Frequency and duration of use	: Duration of activity: >4 hours per day
Area of use:	: Outdoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity: >4 hours per day

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Further specification : Same for all PROC

Frequency and duration of use : Duration of activity: >4 hours per day

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its sourceWebsite: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>**Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems**

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.0087396
Freshwater sediments (mg/kg d.w.) : 0.319672
Marine water (mg/l) : 0.008855
Marine water sediments (mg/kg d.w.) : 0.032391
Agricultural soil (mg/kg dwt): 0.009712
Grassland (mg/kg dwt): 0.008644
Sewage Treatment Plant (mg/l) : 0.83033**Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure**

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 0.086333
Combined routes (mg/kg bw/day): 0.35519**Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure**

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 43.167
Combined routes (mg/kg bw/day): 7.538

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³) : 25.9
Combined routes (mg/kg bw/day): 4.043

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 19.19

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 215.833
Combined routes (mg/kg bw/day): 44.548

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 19.19

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
 Code : 00032069
 Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 172 - Professional Use in formulated MWFs/rolling oils - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use in formulated MWFs/rolling oils - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC11, PROC13, PROC17
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC17: Lubrication at high energy conditions and in partly open process - PROC17

Number of the ES : 172
 Industry Association : Concauwe
 Processes and activities covered by the exposure scenario : Professional Use in formulated MWFs/rolling oils including transfer operations, open rolling and annealing activities, open and contained cutting/machining activities, draining and working on contaminated/reject articles, recycling and disposal of waste oils.
 Additional information : Site 1 + 2

 CONCAWE7B.12, CONCAWE7B.22, CONCAWE7B.9, CONCAWE7B.6, CONCAWE7B.10, CONCAWE7B.24, CONCAWE7B.4, CONCAWE7B.8, CONCAWE7B.5, CONCAWE7B.7, CONCAWE7B.20, CONCAWE7B.15, CONCAWE7B.18, CONCAWE7B.13, CONCAWE7B.16, CONCAWE7B.11, CONCAWE7B.3, CONCAWE7B.21, CONCAWE7B.19, CONCAWE7B.14, CONCAWE7B.23, CONCAWE7B.1, CONCAWE7B.2, CONCAWE7B.17

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 8.7c.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate 18000 m ³ /d.
Other given operational conditions affecting environmental exposure	: 0.5% Release fraction to air from process. 5% Release fraction to surface water from process. 5% Release fraction to soil from process. 0.05% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Concentration of substance in mixture or article	: Substance in preparation (Inhalation): 20%
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Concentration of substance in mixture or article	: Substance in preparation (Inhalation): 20%
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Concentration of substance in mixture or article	: Substance in preparation (Inhalation): 20%
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.004369
- Freshwater sediments (mg/kg d.w.) : 0.015981
- Marine water (mg/l) : 0.000553
- Marine water sediments (mg/kg d.w.) : 0.002021
- Agricultural soil (mg/kg dwt): 0.008571
- Grassland (mg/kg dwt): 0.008571
- Sewage Treatment Plant (mg/l) : 0.000061

Date of issue/Date of revision : ^ (ES Revision date)

717/934

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 0.123333
Outdoor- 0.086333
Combined routes (mg/kg bw/day):
Indoor- 0.360476
Outdoor- 0.35519

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 43.167
Combined routes (mg/kg bw/day):
Indoor- 10.181
Outdoor- 7.538

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 37
Outdoor- 25.9
Combined routes (mg/kg bw/day):
Indoor- 5.629
Outdoor- 4.043

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 13.714
Outdoor- 61.667
Combined routes (mg/kg bw/day):
Indoor- 22.524
Outdoor- 44.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 215.833
Combined routes (mg/kg bw/day):
Indoor- 36.238
Outdoor- 58.262

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 107.143
Inhalation exposure (mg/m³):
Indoor- 246.667
Outdoor- 172.667
Combined routes (mg/kg bw/day):
Indoor- 142.381
Outdoor- 131.81

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 45.048
Outdoor- 39.762

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

SILIPON RN6068

ES 172 - Professional Use in formulated MWFs/rolling oils - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 173 - Professional Use of formulated lubricants in closed systems - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use of formulated lubricants in closed systems - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC11, PROC13, PROC17, PROC18
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09a

Environmental contributing scenarios : **ERC09a: Wide dispersive indoor use of substances in closed systems - ERC09a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC17: Lubrication at high energy conditions and in partly open process - PROC17
PROC18: Greasing at high energy conditions - PROC18

Number of the ES	: 173
Industry Association	: Concauwe
Processes and activities covered by the exposure scenario	: including transfer operations, operation of engines and similar articles, maintenance and disposal of waste oil
Additional information	: Site 1 + 2 CONCAWE6B.21, CONCAWE6B.5, CONCAWE6B.9, CONCAWE6B.8, CONCAWE6B.11, CONCAWE6B.24, CONCAWE6B.23, CONCAWE6B.12, CONCAWE6B.6, CONCAWE6B.14, CONCAWE6B.13, CONCAWE6B.22, CONCAWE6B.20, CONCAWE6B.10, CONCAWE6B.4, CONCAWE6B.1, CONCAWE6B.16, CONCAWE6B.15, CONCAWE6B.7, CONCAWE6B.18, CONCAWE6B.2, CONCAWE6B.19, CONCAWE6B.17, CONCAWE6B.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC09a: Wide dispersive indoor use of substances in closed systems

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 9.6b.v1
Amounts used	: 50 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 5% Release fraction to water from process: 0% Release fraction to soil from process: 0% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day):: 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Concentration of substance in mixture or article	: Substance in preparation (Inhalation): 20%
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Concentration of substance in mixture or article	: Substance in preparation (Inhalation): 20%
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Concentration of substance in mixture or article	: Substance in preparation (Inhalation): 20%
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC18: Greasing at high energy conditions**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09a: Wide dispersive indoor use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.004364
- Freshwater sediments (mg/kg d.w.) : 0.015963
- Marine water (mg/l) : 0.000552
- Marine water sediments (mg/kg d.w.) : 0.00202
- Agricultural soil (mg/kg dwt): 0.008571
- Grassland (mg/kg dwt): 0.008571
- Sewage Treatment Plant (mg/l) : 0.000012

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): 0.342857
- Inhalation exposure (mg/m³):

 - Indoor- 0.123333
 - Outdoor- 0.086333

- Combined routes (mg/kg bw/day):

 - Indoor- 0.360476
 - Outdoor- 0.35519

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): 1.371
- Inhalation exposure (mg/m³):

 - Indoor- 61.667
 - Outdoor- 43.167

- Combined routes (mg/kg bw/day):

 - Indoor- 10.181
 - Outdoor- 7.538

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): 0.342857
- Inhalation exposure (mg/m³):

 - Indoor- 37
 - Outdoor- 25.9

- Combined routes (mg/kg bw/day):

 - Indoor- 5.629
 - Outdoor- 4.043

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 13.714
Outdoor- 61.667
Combined routes (mg/kg bw/day):
Indoor- 22.524
Outdoor- 44.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 215.833
Combined routes (mg/kg bw/day):
Indoor- 36.238
Outdoor- 58.262

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 107.143
Inhalation exposure (mg/m³):
Indoor- 246.667
Outdoor- 172.667
Combined routes (mg/kg bw/day):
Indoor- 142.381
Outdoor- 131.81

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 45.048
Outdoor- 39.762

Exposure estimation and reference to its source - Workers: PROC18: Greasing at high energy conditions

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 174 - Professional Use of formulated lubricants in open systems - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional Use of formulated lubricants in open systems - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC11, PROC13, PROC17, PROC18
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC17: Lubrication at high energy conditions and in partly open process - PROC17
PROC18: Greasing at high energy conditions - PROC18

Number of the ES	: 174
Industry Association	: Concauwe
Processes and activities covered by the exposure scenario	: including transfer operations, operation of engines and similar articles, maintenance and disposal of waste oil
Additional information	: Site 1 + 2 CONCAWE6B.21, CONCAWE6B.5, CONCAWE6B.9, CONCAWE6B.8, CONCAWE6B.11, CONCAWE6B.24, CONCAWE6B.23, CONCAWE6B.12, CONCAWE6B.6, CONCAWE6B.14, CONCAWE6B.13, CONCAWE6B.22, CONCAWE6B.20, CONCAWE6B.10, CONCAWE6B.4, CONCAWE6B.1, CONCAWE6B.16, CONCAWE6B.15, CONCAWE6B.7, CONCAWE6B.18, CONCAWE6B.2, CONCAWE6B.19, CONCAWE6B.17, CONCAWE6B.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 8.7c.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate 18000 m ³ /d.
Other given operational conditions affecting environmental exposure	: 0.5% Release fraction to air from process. 5% Release fraction to surface water from process. 5% Release fraction to soil from process. 0.05% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Concentration of substance in mixture or article	: Substance in preparation (Inhalation): 20%
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Concentration of substance in mixture or article	: Substance in preparation (Inhalation): 20%
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Concentration of substance in mixture or article	: Substance in preparation (Inhalation): 20%
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC18: Greasing at high energy conditions**

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004369
 Freshwater sediments (mg/kg d.w.) : 0.015981
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002021
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000061

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³):
 Indoor- 0.123333
 Outdoor- 0.086333
 Combined routes (mg/kg bw/day):
 Indoor- 0.360476
 Outdoor- 0.35519

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³):
 Indoor- 61.667
 Outdoor- 43.167
 Combined routes (mg/kg bw/day):
 Indoor- 10.181
 Outdoor- 7.538

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³):
 Indoor- 37
 Outdoor- 25.9
 Combined routes (mg/kg bw/day):
 Indoor- 5.629
 Outdoor- 4.043

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 13.714
Outdoor- 61.667
Combined routes (mg/kg bw/day):
Indoor- 22.524
Outdoor- 44.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 215.833
Combined routes (mg/kg bw/day):
Indoor- 36.238
Outdoor- 58.262

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 107.143
Inhalation exposure (mg/m³):
Indoor- 246.667
Outdoor- 172.667
Combined routes (mg/kg bw/day):
Indoor- 142.381
Outdoor- 131.81

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 45.048
Outdoor- 39.762

Exposure estimation and reference to its source - Workers: PROC18: Greasing at high energy conditions

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 175 - Professional use of fuel additives and additised fuels - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Professional use of fuel additives and additised fuels - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC16
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC07
Market sector by type of chemical product: PC13
Environmental contributing scenarios : **ERC07: Industrial use of substances in closed systems - ERC07**
Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC16: Using material as fuel sources, limited exposure to unburned product to be expected - PROC16

Number of the ES	: 175
Industry Association	: ATC-Group
Additional information	: Site 1 + 2 ATC-Group_KP.2.1, ATC-Group_KP.1.1, ATC-Group_KP.3.1, ATCGroup_KP.5.1, ATC-Group_KP.4.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC07: Industrial use of substances in closed systems	
Amounts used	: 40 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 5% Release fraction to water from process: 5% Release fraction to soil from process: 5% Fraction used at main source: 100% Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification	: Transfer of substance or preparation (charging/discharging) between containers at non dedicated facilities i.e. filling of fuel tanks or addition of aftermarket additives
Frequency and duration of use	: Duration of activity: > 4 hour(s)
Other given operational conditions affecting workers exposure	: Indoor
Ventilation control measures	: Ventilation Rate: 40%

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Further specification	: <u>Sub-scenario(s)</u> : 1- Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities 2- Disposal of waste product & used containers 3- Maintenance activities. General exposure during maintenance work including draining, refilling and testing
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Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC16: Using material as fuel sources, limited exposure to unburned product to be expected**

Further specification : Use as fuel for heating or power

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC07: Industrial use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009824
Grassland (mg/kg dwt): 0.008709
Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³): 185
Combined routes (mg/kg bw/day): 40.143

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

- Sub-scenario(s):

- 1- Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
- 2- Disposal of waste product & used containers
- 3- Maintenance activities. General exposure during maintenance work including draining, refilling and testing

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³): 123.333
Combined routes (mg/kg bw/day): 24.476

Exposure estimation and reference to its source - Workers: PROC16: Using material as fuel sources, limited exposure to unburned product to be expected

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³): 12.333
Combined routes (mg/kg bw/day): 2.105

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 176 - Professional use of fuel additives and additised fuels (Wide Dispersive Use, Indoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional use of fuel additives and additised fuels (Wide Dispersive Use (WDU), Indoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Process Category: PROC08a, PROC08b, PROC17

Substance supplied to that use in form of: In a mixture

Sector of end use: SU22

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC09a

Market sector by type of chemical product: PC13

Environmental contributing scenarios : **ERC09a: Wide dispersive indoor use of substances in closed systems - ERC09a**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC17: Lubrication at high energy conditions and in partly open process - PROC17

Number of the ES : 176

Additional information : Site 1 + 2

ATC-Group_KP.2.1, ATC-Group_KP.1.1, ATC-Group_KP.3.1, ATCGroup_KP.5.1, ATC-Group_KP.4.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC09a: Wide dispersive indoor use of substances in closed systems**

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate 18000 m3/d.

Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 5%
Release fraction to water from process: 0%
Release fraction to soil from process: 0%
Fraction used at main source: 0.2%
Fraction tonnage to region: 10%

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation) : 5 - 25%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Ventilation control measures : Ventilation Rate: 40%

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation) : 5 - 25%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC17: Lubrication at high energy conditions and in partly open process

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation) : 5 - 25%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Other given operational conditions affecting workers exposure : Indoor

Ventilation control measures : Ventilation Rate: 40%

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09a: Wide dispersive indoor use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation	: <u>Compartment: Fresh water</u> PEC: 0.007337 mg/l
	<u>Compartment: Freshwater sediment</u> PEC: 0.027033 mg/kg dwt
	<u>Compartment: Marine water</u> PEC: 0.000823 mg/l
	<u>Compartment: Marine water sediment</u> PEC: 0.003032 mg/kg dwt
	<u>Compartment: Agricultural soil</u> PEC: 0.005551 mg/kg dwt
	<u>Compartment: Grassland</u> PEC: 0.005534 mg/kg dwt
	<u>Compartment: Sewage Treatment Plant</u> PEC: 0 mg/l

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³): 185 Combined routes (mg/kg bw/day): 40.143

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³): 123.333 Combined routes (mg/kg bw/day): 24.476

Exposure estimation and reference to its source - Workers: PROC17: Lubrication at high energy conditions and in partly open process

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 27.429 Inhalation exposure (mg/m ³): 222 Combined routes (mg/kg bw/day): 59.143

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 177 - Professional use of fuel additives and additised fuels (Wide Dispersive Use, Outdoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Professional use of fuel additives and additised fuels (Wide Dispersive Use (WDU), Outdoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Process Category: PROC08a, PROC08b, PROC18

Substance supplied to that use in form of: In a mixture, As such

Sector of end use: SU22

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC09b

Market sector by type of chemical product: PC13

Environmental contributing scenarios : **ERC09b: Wide dispersive outdoor use of substances in closed systems - ERC09b**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC18: Greasing at high energy conditions - PROC18

Number of the ES : 177

Additional information : Site 1 + 2

ATCGroup_KP.3.3, ATC-Group_KP.2.3, ATC-Group_KP.5.3, ATC-Group_KP.1.3, ATC-Group_KP.4.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC09b: Wide dispersive outdoor use of substances in closed systems**

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m³/d.

Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 5%
Release fraction to water from process: 5%
Release fraction to soil from process: 5%
Fraction used at main source: 0.2%
Fraction tonnage to region: 10%

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Outdoor

Ventilation control measures : Ventilation Rate: 40%

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC18: Greasing at high energy conditions

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09b: Wide dispersive outdoor use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Compartment: Fresh water
PEC: 0.007361 mg/l

Compartment: Freshwater sediment
PEC: 0.027123 mg/kg dwt

Compartment: Marine water
PEC: 0.000825 mg/l

Compartment: Marine water sediment
PEC: 0.003041 mg/kg dwt

Compartment: Agricultural soil
PEC: 0.005533 mg/kg dwt

Compartment: Grassland
PEC: 0.005533 mg/kg dwt

Compartment: Sewage Treatment Plant
PEC: 0.000244 mg/l

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³): 215.833 Combined routes (mg/kg bw/day): 44.548

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 6.857 Inhalation exposure (mg/m ³): 86.333 Combined routes (mg/kg bw/day): 19.19

Exposure estimation and reference to its source - Workers: PROC18: Greasing at high energy conditions

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): 13.714 Inhalation exposure (mg/m ³): 259 Combined routes (mg/kg bw/day): 50.714

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 178 - Use as a component of cleaning products for professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as a component of cleaning products for professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC10, PROC11, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 178
Industry Association	: Concauwe
Processes and activities covered by the exposure scenario	: Includes pouring/unloading from drums or containers; and exposures during cleaning activities (automated and by hand)
Additional information	: Site 1+ 2 CONCAWE4B.7, CONCAWE4B.17, CONCAWE4B.8, CONCAWE4B.5, CONCAWE4B.12, CONCAWE4B.15, CONCAWE4B.2, CONCAWE4B.14, CONCAWE4B.13, CONCAWE4B.18, CONCAWE4B.1, CONCAWE4B.11, CONCAWE4B.9, CONCAWE4B.4, CONCAWE4B.3, CONCAWE4B.10, CONCAWE4B.6, CONCAWE4B.16

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 8.4b.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 2% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.05% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure**

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)**

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.015959
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.008583
 Grassland (mg/kg dwt): 0.008572
 Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 respectively [Indoor; Outdoor]
 Dermal exposure (mg/kg bw/day): [0.342857; 0.342857]
 Inhalation exposure (mg/m³) : [0.123333; 0.086333]
 Combined routes (mg/kg bw/day): [0.360476; 0.35519]

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Indoor; Outdoor]
Dermal exposure (mg/kg bw/day): [1.371; 1.371]
Inhalation exposure (mg/m³) : [61.667; 43.167]
Combined routes (mg/kg bw/day): [10.181; 7.538]

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Indoor; Outdoor]
Dermal exposure (mg/kg bw/day): [0.342857; 0.342857]
Inhalation exposure (mg/m³) : [37; 25.9]
Combined routes (mg/kg bw/day): [5.629; 4.043]

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Indoor; Outdoor]
Dermal exposure (mg/kg bw/day): [6.857; 6.857]
Inhalation exposure (mg/m³) : [123.333; 86.333]
Combined routes (mg/kg bw/day): [24.476; 19.19]

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Indoor; Outdoor]
Dermal exposure (mg/kg bw/day): [13.714; 13.714]
Inhalation exposure (mg/m³) : [61.667; 215.833]
Combined routes (mg/kg bw/day): [22.524; 44.548]

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Indoor; Outdoor]
Dermal exposure (mg/kg bw/day): [6.857; 6.857]
Inhalation exposure (mg/m³) : [123.333; 86.333]
Combined routes (mg/kg bw/day): [24.476; 19.19]

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Indoor; Outdoor]
Dermal exposure (mg/kg bw/day): [27.429; 27.429]
Inhalation exposure (mg/m³) : [61.667; 215.833]
Combined routes (mg/kg bw/day): [36.238; 58.262]

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Indoor; Outdoor]
Dermal exposure (mg/kg bw/day): [107.143; 107.143]
Inhalation exposure (mg/m³) : [246.667; 172.667]
Combined routes (mg/kg bw/day): [142.381; 131.81]

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
respectively [Indoor; Outdoor]
Dermal exposure (mg/kg bw/day): [13.714; 13.714]
Inhalation exposure (mg/m³) : [123.333; 86.333]
Combined routes (mg/kg bw/day): [31.333; 26.048]

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 179 - Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC04, PROC08a, PROC08b, PROC11, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES : 179
Industry Association : Concauwe
Additional information : Site 1 + 2

CONCAWE11A.6, CONCAWE11A.13, CONCAWE11A.4, CONCAWE11A.2, CONCAWE11A.7, CONCAWE11A.11, CONCAWE11A.9, CONCAWE11A.12, CONCAWE11A.14, CONCAWE11A.5, CONCAWE11A.8, CONCAWE11A.3, CONCAWE11A.10, CONCAWE11A.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08a: Wide dispersive indoor use of processing aids in open systems**

Further specification : Specific Environmental Release Category:
ESVOC SPERC Code 8.7c.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate 18000 m³/d.

Date of issue/Date of revision : ^(ES Revision date)

753/934

SILIPON RN6068

ES 179 - Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Other given operational conditions affecting environmental exposure : 0.5% Release fraction to air from process.
5% Release fraction to surface water from process.
5% Release fraction to soil from process.
0.05% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

SILIPON RN6068

ES 179 - Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Concentration of substance in mixture or article : Substance in preparation (Inhalation): 20%

Frequency and duration of use : Duration of activity: > 4 hour(s)

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004369
Freshwater sediments (mg/kg d.w.) : 0.015981
Marine water (mg/l) : 0.000553
Marine water sediments (mg/kg d.w.) : 0.002021
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000061

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 0.123333
Outdoor- 0.086333
Combined routes (mg/kg bw/day):
Indoor- 0.360476
Outdoor- 0.35519

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 43.167
Combined routes (mg/kg bw/day):
Indoor- 10.181
Outdoor- 7.538

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 13.714
Outdoor- 61.667
Combined routes (mg/kg bw/day):
Indoor- 22.524
Outdoor- 44.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 107.143
Inhalation exposure (mg/m³):
Indoor- 246.667
Outdoor- 172.667
Combined routes (mg/kg bw/day):
Indoor- 142.381
Outdoor- 131.81

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 180 - Use as binders and release agents in professional settings - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as binders and release agents - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC06, PROC08a, PROC08b, PROC10, PROC11, PROC14
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC06: Calendaring operations - PROC06
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation - PROC14

Number of the ES : 180
Industry Association : Concawe
Processes and activities covered by the exposure scenario : Use as binders and release agents , including material transfers, mixing, application and disposal.
Additional information : Site 1+ 2

 CONCAWE10B.8, CONCAWE10B.9, CONCAWE10B.19, CONCAWE10B.6, CONCAWE10B.7, CONCAWE10B.11, CONCAWE10B.20, CONCAWE10B.15, CONCAWE10B.1, CONCAWE10B.12, CONCAWE10B.4, CONCAWE10B.17, CONCAWE10B.5, CONCAWE10B.18, CONCAWE10B.10, CONCAWE10B.16, CONCAWE10B.2, CONCAWE10B.14, CONCAWE10B.13, CONCAWE10B.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 8.10b.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m ³ /d
Other given operational conditions affecting environmental exposure	: 95% Release fraction to air from process. 2.5% Release fraction to surface water from process. 2.5% Release fraction to soil from process. 0.05% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC06: Calendering operations**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing**

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying**

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation**

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.004366
	Freshwater sediments (mg/kg d.w.) : 0.01597
	Marine water (mg/l) : 0.000552
	Marine water sediments (mg/kg d.w.) : 0.00202
	Agricultural soil (mg/kg dwt): 0.008571
	Grassland (mg/kg dwt): 0.008571
	Sewage Treatment Plant (mg/l) : 0.00003

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 0.123333
Outdoor- 0.086333
Combined routes (mg/kg bw/day):
Indoor- 0.360476
Outdoor- 0.35519

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 43.167
Combined routes (mg/kg bw/day):
Indoor- 10.181
Outdoor- 7.538

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 37
Outdoor- 25.9
Combined routes (mg/kg bw/day):
Indoor- 5.629
Outdoor- 4.043

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC06: Calendering operations

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 45.048
Outdoor- 39.762

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 13.714
Outdoor- 61.667
Combined routes (mg/kg bw/day):
Indoor- 22.524
Outdoor- 44.524

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³):
Indoor- 215.833
Outdoor- 61.667
Combined routes (mg/kg bw/day):
Indoor- 58.262
Outdoor- 36.238

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 107.143
Inhalation exposure (mg/m³):
Indoor- 246.667
Outdoor- 172.667
Combined routes (mg/kg bw/day):
Indoor- 142.381
Outdoor- 131.81

Exposure estimation and reference to its source - Workers: PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 3.429
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 21.048
Outdoor- 15.762

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
 Code : 00032069
 Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 181 - Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in professional equipment - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in professional equipment - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC09, PROC20
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09a

Environmental contributing scenarios : **ERC09a: Wide dispersive indoor use of substances in closed systems - ERC09a**

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC08a: Transfer of substance or preparation (charging/discharging) from/ to vessels/large containers at non-dedicated facilities - PROC08a
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems - PROC20

Number of the ES	: 181
Industry Association	: Concawe
Processes and activities covered by the exposure scenario	: Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in professional equipment including maintenance.
Additional information	: Site 1+ 2 CONCAWE13B.4, CONCAWE13B.10, CONCAWE13B.5, CONCAWE13B.1, CONCAWE13B.3, CONCAWE13B.11, CONCAWE13B.6, CONCAWE13B.9, CONCAWE13B.12, CONCAWE13B.2, CONCAWE13B.7, CONCAWE13B.8

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC09a: Wide dispersive indoor use of substances in closed systems	
Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 9.13b.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d

SILIPON RN6068

ES 181 - Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in professional equipment - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Other given operational conditions affecting environmental exposure

: 5% Release fraction to air from process.
2.5% Release fraction to surface water from process.
2.5% Release fraction to soil from process.
0.05% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil

: See relevant spERC factsheet.

Conditions and measures related to municipal sewage treatment plant

: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification

: Same for all PROC

Concentration of substance in mixture or article

: Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use

: Duration of activity >4 hours

Area of use:

: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification

: Same for all PROC

Concentration of substance in mixture or article

: Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use

: Duration of activity >4 hours

Area of use:

: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification

: Same for all PROC

Concentration of substance in mixture or article

: Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use

: Duration of activity >4 hours

Area of use:

: Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

SILIPON RN6068

ES 181 - Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in professional equipment - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems

Further specification : Same for all PROC
Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use : Duration of activity >4 hours
Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09a: Wide dispersive indoor use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.
Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004366
Freshwater sediments (mg/kg d.w.) : 0.01597
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.00202
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.00003

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 0.123333
Outdoor- 0.086333
Combined routes (mg/kg bw/day):
Indoor- 0.360476
Outdoor- 0.35519

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 43.167
Combined routes (mg/kg bw/day):
Indoor- 10.181
Outdoor- 7.538

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 37
Outdoor- 25.9
Combined routes (mg/kg bw/day):
Indoor- 5.629
Outdoor- 4.043

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 215.833
Combined routes (mg/kg bw/day):
Indoor- 22.524
Outdoor- 44.524

SILIPON RN6068

ES 181 - Use as functional fluids e.g. cable oils, transfer oils, insulators, hydraulic fluids in professional equipment - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC20: Heat and pressure transfer fluids in dispersive, professional use but closed systems

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.714
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 43.167
Combined routes (mg/kg bw/day):
Indoor- 10.524
Outdoor- 7.881

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 182 - Use in coatings (paints, inks, adhesives, etc) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use in coatings (paints, inks, adhesives, etc) - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC10, PROC11, PROC13, PROC15, PROC19
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems** - ERC08a

Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure** - PROC01
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) - PROC05
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13
PROC15: Use as laboratory reagent - PROC15
PROC19: Hand-mixing with intimate contact and only PPE available - PROC19

Number of the ES : 182
Industry Association : ConcaWE
Processes and activities covered by the exposure scenario : Includes exposures during use (including materials transfer and spraying, brushing and other manual application tasks); and equipment cleaning.

Additional information : Site 1+ 2

CONCAWE-3B.9, CONCAWE-3B.7, CONCAWE-3B.13, CONCAWE-3B.23, CONCAWE-3B.10, CONCAWE-3B.19, CONCAWE-3B.6, CONCAWE-3B.26, CONCAWE-3B.18, CONCAWE-3B.22, CONCAWE-3B.12, CONCAWE-3B.25, CONCAWE-3B.2, CONCAWE-3B.11, CONCAWE-3B.16, CONCAWE-3B.24, CONCAWE-3B.21, CONCAWE-3B.15, CONCAWE-3B.8, CONCAWE-3B.5, CONCAWE-3B.3, CONCAWE-3B.1, CONCAWE-3B.17, CONCAWE-3B.4, CONCAWE-3B.14, CONCAWE-3B.20

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 8.3b.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m ³ /d
Other given operational conditions affecting environmental exposure	: 98% Release fraction to air from process. 1% Release fraction to surface water from process. 1% Release fraction to soil from process. 0.05% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor and outdoor use.
Conditions and measures related to personal protection and hygiene	

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities**

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC19: Hand-mixing with intimate contact and only PPE available

Further specification : Same for all PROC

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor and outdoor use.

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004364
Freshwater sediments (mg/kg d.w.) : 0.015963
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.00202
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000012

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 0.123333
Outdoor- 0.086333
Combined routes (mg/kg bw/day):
Indoor- 0.360476
Outdoor- 0.35519

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 43.167
Combined routes (mg/kg bw/day):
Indoor- 10.181
Outdoor- 7.538

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 37
Outdoor- 25.9
Combined routes (mg/kg bw/day):
Indoor- 5.629

Outdoor- 4.043

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19**Exposure estimation and reference to its source - Workers: PROC05: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048**Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 215.833
Combined routes (mg/kg bw/day):
Indoor- 22.524
Outdoor- 44.524**Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities****Exposure assessment (human):** : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 24.476
Outdoor- 19.19

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 27.429
Inhalation exposure (mg/m³):
Indoor- 215.833
Outdoor- 61.667
Combined routes (mg/kg bw/day):
Indoor- 58.262
Outdoor- 36.238

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 107.143
Inhalation exposure (mg/m³):
Indoor- 246.667
Outdoor- 172.667
Combined routes (mg/kg bw/day):
Indoor- 142.381
Outdoor- 131.81

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³):
Indoor- 123.333
Outdoor- 86.333
Combined routes (mg/kg bw/day):
Indoor- 31.333
Outdoor- 26.048

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.342857
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 43.167
Combined routes (mg/kg bw/day):
Indoor- 9.152
Outdoor- 6.51

Exposure estimation and reference to its source - Workers: PROC19: Hand-mixing with intimate contact and only PPE available

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

SILIPON RN6068

**ES 182 - Use in coatings (paints, inks, adhesives, etc) -
Professional - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts**

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 141.429
Inhalation exposure (mg/m³):
Indoor- 61.667
Outdoor- 215.833
Combined routes (mg/kg bw/day):
Indoor- 150.238
Outdoor- 172.262

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 183 - Use of small quantities within laboratory settings - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use of small quantities within laboratory settings - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC10, PROC15
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC21
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios : **PROC10: Roller application or brushing - PROC10**
PROC15: Use as laboratory reagent - PROC15

Number of the ES : 183
Additional information : Site 1 + 2
CONCAWE17C.1; CONCAWE17C.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 8.17.v1
Amounts used : 1 000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 50%
Release fraction to water from process: 50%
Release fraction to soil from process: 0%
Fraction used at main source: 0.05%
Fraction tonnage to region: 10%
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Frequency and duration of use : Duration of activity >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004424
 Freshwater sediments (mg/kg d.w.) : 0.016182
 Marine water (mg/l) : 0.000558
 Marine water sediments (mg/kg d.w.) : 0.002042
 Agricultural soil (mg/kg dwt): 0.008572
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000609

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 27.429
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 36.238

Exposure estimation and reference to its source - Workers: PROC15: Use as laboratory reagent

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 9.152

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 183 - Use of small quantities within laboratory settings - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 184 - Use of the substance for the treatment of water in open and closed systems - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use of the substance for the treatment of water in open and closed systems - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC13
Substance supplied to that use in form of: In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08f
Market sector by type of chemical product: PC21

Environmental contributing scenarios : **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix - ERC08f**
Health Contributing scenarios : **PROC01: Use in closed process, no likelihood of exposure - PROC01**
PROC02: Use in closed, continuous process with occasional controlled exposure - PROC02
PROC03: Use in closed batch process (synthesis or formulation) - PROC03
PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 184
Industry Association	: Concauwe
Additional information	: Site 1 + 2
	CONCAWE21B.5, CONCAWE21B.1, CONCAWE21B.7, CONCAWE21B.4, CONCAWE21B.3, CONCAWE21B.2, CONCAWE21B.6

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 8.22b.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure	: 1% Release fraction to air from process. 99% Release fraction to surface water from process. 0% Release fraction to soil from process. 1.46% Fraction used at main source. 10% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC01: Use in closed process, no likelihood of exposure

Further specification	: - Use as a lubricant/grease in a closed system
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC02: Use in closed, continuous process with occasional controlled exposure

Further specification	: Same for all PROC.
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC03: Use in closed batch process (synthesis or formulation)

Further specification	: Same for all PROC.
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Frequency and duration of use	: Duration of activity >4 hours
Area of use:	: Indoor

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling worker exposure for: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises**Further specification** : Same for all PROC.**Concentration of substance in mixture or article** : Substance is in preparations. (Inhalation): 20%.**Frequency and duration of use** : Duration of activity >4 hours**Area of use:** : Indoor**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities****Further specification** : - Transfer of processing aids into drums / vessels**Concentration of substance in mixture or article** : Substance is in preparations. (Inhalation): 20%.**Frequency and duration of use** : Duration of activity >4 hours**Area of use:** : Indoor**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities****Further specification** : - Transfer of processing aids into drums / vessels**Concentration of substance in mixture or article** : Substance is in preparations. (Inhalation): 20%.**Frequency and duration of use** : Duration of activity >4 hours**Area of use:** : Indoor**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring****Further specification** : Same for all PROC.**Concentration of substance in mixture or article** : Substance is in preparations. (Inhalation): 20%.**Frequency and duration of use** : Duration of activity >4 hours**Area of use:** : Indoor**Conditions and measures related to personal protection and hygiene****Section 3 - Exposure estimation and reference to its source****Website:** : [http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE:](http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/AISE)
http://www.aise.eu/reach/?page=exposureass_sub4
http://www.aise.eu/reach/?page=exposureass_sub2

Exposure estimation and reference to its source - Environment: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.007886
 Freshwater sediments (mg/kg d.w.) : 0.028845
 Marine water (mg/l) : 0.009004
 Marine water sediments (mg/kg d.w.) : 0.003308
 Agricultural soil (mg/kg dwt): 0.008619
 Grassland (mg/kg dwt): 0.008574
 Sewage Treatment Plant (mg/l) : 0.03523

Exposure estimation and reference to its source - Workers: PROC01: Use in closed process, no likelihood of exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 0.123333
 Combined routes (mg/kg bw/day): 0.360476

Exposure estimation and reference to its source - Workers: PROC02: Use in closed, continuous process with occasional controlled exposure

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 1.371
 Inhalation exposure (mg/m³) : 12.333
 Combined routes (mg/kg bw/day): 3.133

Exposure estimation and reference to its source - Workers: PROC03: Use in closed batch process (synthesis or formulation)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.342857
 Inhalation exposure (mg/m³) : 37
 Combined routes (mg/kg bw/day): 5.629

Exposure estimation and reference to its source - Workers: PROC04: Use in batch and other process (synthesis) where opportunity for exposure arises

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 6.857
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 13.714
 Inhalation exposure (mg/m³) : 123.333
 Combined routes (mg/kg bw/day): 31.333

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 6.857
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 15.667

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 13.714
Inhalation exposure (mg/m³) : 123.333
Combined routes (mg/kg bw/day): 31.333

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 185 - Wide dispersive use of non-volatile substances in Construction Chemicals, indoor - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive use of non-volatile substances in Construction Chemicals, Indoors Professional Use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC10, PROC11, PROC13
Substance supplied to that use in form of: In a mixture
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix** - ERC08c

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities** - PROC08a
PROC10: Roller application or brushing - PROC10
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES : 185
Industry Association : EFCC
Additional information : Site 1 + 2

EFCC (Bauchemie)-P1.8, EFCC (Bauchemie)-P1.4, EFCC (Bauchemie)-P1.2, EFCC (Bauchemie)-P1.12, EFCC (Bauchemie)-C1.2.1, EFCC (Bauchemie)-C1.2.2, EFCC (Bauchemie)-C1.2.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Further specification : Specific Environmental Release Category: EFCC SPERC Code 8C.1a.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m³/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
1% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

786/934

SILIPON RN6068

**ES 185 - Wide dispersive use of non-volatile substances
in Construction Chemicals, indoor - Professional -
Sulfuric acid, mono-C12-14-alkyl esters, sodium salts**

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 50%.

Frequency and duration of use : Duration of activity: 240 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: 1 - 4 hour(s)

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 50%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 50%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Respiratory protection : Wear respiratory protection: 95%

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 50%.

Frequency and duration of use : Duration of activity: >4 hours

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004368
 Freshwater sediments (mg/kg d.w.) : 0.015976
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002021
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 154.167
 Combined routes (mg/kg bw/day): 24.767

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 5.486
 Inhalation exposure (mg/m³) : 154.167
 Combined routes (mg/kg bw/day): 27.51

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 21.429
 Inhalation exposure (mg/m³) : 61.667
 Combined routes (mg/kg bw/day): 30.238

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³) : 123.333
 Combined routes (mg/kg bw/day): 20.362

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

SILIPON RN6068

***ES 185 - Wide dispersive use of non-volatile substances
in Construction Chemicals, indoor - Professional -
Sulfuric acid, mono-C12-14-alkyl esters, sodium salts***

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 186 - Wide dispersive use of non-volatile substances in Construction Chemicals, outdoor - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive use of non-volatile substances in Construction Chemicals, Outdoor Professional Use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC10, PROC11, PROC13
Substance supplied to that use in form of: In a mixture, As such
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08f

Environmental contributing scenarios : **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix - ERC08f**

Health Contributing scenarios : **PROC10: Roller application or brushing - PROC10**
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 186
Industry Association	: EFCC
Additional information	: Site 1 + 2 EFCC (Bauchemie)-P1.14, EFCC (Bauchemie)-P1.10, EFCC (Bauchemie)-P1.6, EFCC (Bauchemie)-C1.4.2, EFCC (Bauchemie)-C1.4.3, EFCC (Bauchemie)-C1.4.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Further specification : Specific Environmental Release Category: EFCC SPERC Code 8F.1a.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
1% Release fraction to surface water from process.
3.7% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : See relevant spERC factsheet.

SILIPON RN6068	ES 186 - Wide dispersive use of non-volatile substances in Construction Chemicals, outdoor - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing	
Frequency and duration of use	: Duration of activity: >4 hours
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying	
Frequency and duration of use	: Duration of activity: >4 hours
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours
Respiratory protection	: Wear respiratory protection: 95%
Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring	
Frequency and duration of use	: Duration of activity: >4 hours
Area of use:	: Outdoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%; permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004368 Freshwater sediments (mg/kg d.w.) : 0.015976 Marine water (mg/l) : 0.000553 Marine water sediments (mg/kg d.w.) : 0.002021 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.000049
Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 5.486 Inhalation exposure (mg/m ³) : 154.167 Combined routes (mg/kg bw/day): 27.51

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 21.429
Inhalation exposure (mg/m³) : 215.833
Combined routes (mg/kg bw/day): 36.319

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 86.333
Combined routes (mg/kg bw/day): 15.076

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 187 - Handling (Inclusion in Matrix) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Handling (Inclusion in Matrix) - Professional use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC20, PC23, PC24, PC32, PC34

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix - ERC05**

Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES	: 187
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-T4.2, TEGEWA-L3.1, TEGEWA-T4.3, TEGEWA-L3.3, TEGEWA-F6.1, TEGEWA-T4.1, TEGEWA-L3.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.

Date of issue/Date of revision : ^(ES Revision date)

793/934

SILIPON RN6068	ES 187 - Handling (Inclusion in Matrix) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Frequency and duration of use	: Duration of activity: 240 min/day
Area of use:	: Indoor
Ventilation control measures	: Ventilation Rate: 40 %
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).
Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Frequency and duration of use	: Duration of activity: 240 min/day
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).
Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Frequency and duration of use	: Duration of activity: 240 min/day
Area of use:	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.085239 Freshwater sediments (mg/kg d.w.) : 0.311784 Marine water (mg/l) : 0.00864 Marine water sediments (mg/kg d.w.) : 0.031602 Agricultural soil (mg/kg dwt): 0.009682 Grassland (mg/kg dwt): 0.008642 Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 92.5
Combined routes (mg/kg bw/day): 15.957

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 10.181

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 10.181

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 188 - Handling (Reactive Processing Aids) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Handling (Reactive Processing Aids) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06b
Market sector by type of chemical product: PC20, PC23, PC32, PC34
Environmental contributing scenarios : **ERC06b: Industrial use of reactive processing aids - ERC06b**
Health Contributing scenarios : **PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities - PROC08a**
PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities - PROC08b
PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09

Number of the ES	: 188
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-L4.2, TEGEWA-T5.3, TEGEWA-L4.3, TEGEWA-T5.1, TEGEWA-T5.2, TEGEWA-L4.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06b: Industrial use of reactive processing aids	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 6b.1.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 2% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.

SILIPON RN6068	ES 188 - Handling (Reactive Processing Aids) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000
Contributing scenario controlling worker exposure for: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	
Frequency and duration of use	: Duration of activity: 240 min/day
Other given operational conditions affecting workers exposure	: Indoor
Ventilation control measures	: Ventilation Rate: 40%.
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).
Contributing scenario controlling worker exposure for: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	
Frequency and duration of use	: Duration of activity: 240 min/day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).
Contributing scenario controlling worker exposure for: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	
Frequency and duration of use	: Duration of activity: 240 min/day
Other given operational conditions affecting workers exposure	: Indoor
Conditions and measures related to personal protection and hygiene	
Personal protection	: Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC06b: Industrial use of reactive processing aids	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.085239 Freshwater sediments (mg/kg d.w.) : 0.311784 Marine water (mg/l) : 0.00864 Marine water sediments (mg/kg d.w.) : 0.031602 Agricultural soil (mg/kg dwt): 0.009682 Grassland (mg/kg dwt): 0.008642 Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC08a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³) : 92.5
Combined routes (mg/kg bw/day): 15.957

Exposure estimation and reference to its source - Workers: PROC08b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 10.181

Exposure estimation and reference to its source - Workers: PROC09: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 1.371
Inhalation exposure (mg/m³) : 61.667
Combined routes (mg/kg bw/day): 10.181

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 189 - Use for leather finishing (Inclusion in Matrix) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use for leather finishing (Inclusion in Matrix) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC10, PROC11
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC23, PC32

Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix** - ERC05

Health Contributing scenarios : **PROC10: Roller application or brushing** - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES	: 189
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-L9.2, TEGEWA-L9.3, TEGEWA-L9.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity: >4 hours per day or 240 min/day

Area of use: : Indoor

Ventilation control measures : Ventilation Rate: 40%.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%,
- Exposure Duration: 240 minutes per day; permeation breakthrough time of: minutes 1 - 4 hour(s).
- Exposure Duration >4 hours per day; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Frequency and duration of use : Duration of activity: >4 hours per day

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.085239
Freshwater sediments (mg/kg d.w.) : 0.311784
Marine water (mg/l) : 0.00864
Marine water sediments (mg/kg d.w.) : 0.031602
Agricultural soil (mg/kg dwt): 0.009682
Grassland (mg/kg dwt): 0.008642
Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 5.486
Inhalation exposure (mg/m³):
- 92.5 (Exposure Duration : 240 minutes per day)
- 185 (Exposure Duration: >4 hours per day)
Combined routes (mg/kg bw/day):
- 18.7 (Exposure Duration: 240 minutes per day)
- 31.914 (Exposure Duration >4 hours per day)

SILIPON RN6068

**ES 189 - Use for leather finishing (Inclusion in Matrix) -
Professional - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts**

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.428571
Inhalation exposure (mg/m³): 246.667
Combined routes (mg/kg bw/day): 35.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 190 - Use for leather finishing (Monomers) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use for leather finishing (Monomers) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC10, PROC11, PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06c
Market sector by type of chemical product: PC23, PC32

Environmental contributing scenarios : **ERC06c: Industrial use of monomers for manufacture of thermoplastics - ERC06c**

Health Contributing scenarios : **PROC10: Roller application or brushing - PROC10**
PROC11: Non industrial spraying - PROC11
PROC13: Treatment of articles by dipping and pouring - PROC13

Number of the ES	: 190
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-L10.2, TEGEWA-L10.3, TEGEWA-L10.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06c: Industrial use of monomers for manufacture of thermoplastics

Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 40 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 5% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Date of issue/Date of revision : ^(ES Revision date)

802/934

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity: >4 hours per day

Area of use: : Indoor

Ventilation control measures : Ventilation Rate: 40%.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Frequency and duration of use : Duration of activity: >4 hours per day

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity: >4 hours per day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06c: Industrial use of monomers for manufacture of thermoplastics

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.093327
Freshwater sediments (mg/kg d.w.) : 0.341366
Marine water (mg/l) : 0.009448
Marine water sediments (mg/kg d.w.) : 0.03456
Agricultural soil (mg/kg dwt): 0.009824
Grassland (mg/kg dwt): 0.008709
Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 5.486
Inhalation exposure (mg/m³): 185
Combined routes (mg/kg bw/day): 31.914

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.428571
Inhalation exposure (mg/m³): 246.667
Combined routes (mg/kg bw/day): 35.667

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³): 123.333
Combined routes (mg/kg bw/day): 20.362

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 191 - Use for leather finishing (No inclusion in Matrix) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use for leather finishing (No Inclusion in Matrix) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC10, PROC11
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC23, PC32
Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04
Health Contributing scenarios : **PROC10: Roller application or brushing** - PROC10
PROC11: Non industrial spraying - PROC11

Number of the ES	: 191
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-L8.1, TEGEWA-L8.2, TEGEWA-L8.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Amounts used	: 1 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 100% Release fraction to air from process. 100% Release fraction to surface water from process. 5% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Frequency and duration of use : Duration of activity: >4 hours per day

Area of use: : Indoor

Ventilation control measures : Ventilation Rate: 40%.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%,
- Exposure Duration: 240 minutes per day; permeation breakthrough time of: 1 - 4 hour(s).
- Exposure Duration >4 hours per day; permeation breakthrough time of: >4 hours

Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Frequency and duration of use : Duration of activity: >4 hours per day

Area of use: : Indoor

Technical conditions and measures to control dispersion from source towards the worker : Local Exhaust Ventilation (LEV) is required.

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: >4 hours

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.048845
Freshwater sediments (mg/kg d.w.) : 0.178662
Marine water (mg/l) : 0.005
Marine water sediments (mg/kg d.w.) : 0.01829
Agricultural soil (mg/kg dwt): 0.009197
Grassland (mg/kg dwt): 0.00864
Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC10: Roller application or brushing

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 5.486
Inhalation exposure (mg/m³):
- 92.5 (Exposure Duration : 240 minutes per day)
- 185 (Exposure Duration: >4 hours per day)
Combined routes (mg/kg bw/day):
- 18.7 (Exposure Duration: 240 minutes per day)
- 31.914 (Exposure Duration >4 hours per day)

SILIPON RN6068

**ES 191 - Use for leather finishing (No inclusion in Matrix)
- Professional - Sulfuric acid, mono-C12-14-alkyl esters,
sodium salts**

Exposure estimation and reference to its source - Workers: PROC11: Non industrial spraying

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.428571
Inhalation exposure (mg/m³): 246.667
Combined routes (mg/kg bw/day): 35.667

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 192 - Use in wet end (Inclusion in Matrix) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use in wet end (Inclusion in Matrix) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC05
Market sector by type of chemical product: PC20, PC23
Environmental contributing scenarios : **ERC05: Industrial use resulting in inclusion into or onto a matrix** - ERC05
Health Contributing scenarios : **PROC13: Treatment of articles by dipping and pouring** - PROC13

Number of the ES	: 226192
Industry Association	: TEGEWA
Additional information	: Site 1 + 2 TEGEWA-L6.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC05: Industrial use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 5.1d.v1
Amounts used	: 400 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 5% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity: 240 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80% , permeation breakthrough time of: 1 - 4 hour(s)

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC05: Industrial use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.085239
Freshwater sediments (mg/kg d.w.) : 0.311784
Marine water (mg/l) : 0.00864
Marine water sediments (mg/kg d.w.) : 0.031602
Agricultural soil (mg/kg dwt): 0.009682
Grassland (mg/kg dwt): 0.008642
Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³): 61.667
Combined routes (mg/kg bw/day): 11.552

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 193 - Use in wet end (No inclusion in Matrix) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use in wet end (No Inclusion in Matrix) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC04
Market sector by type of chemical product: PC20, PC23
Environmental contributing scenarios : **ERC04: Industrial use of processing aids in processes and products, not becoming part of articles** - ERC04
Health Contributing scenarios : **PROC13: Treatment of articles by dipping and pouring** - PROC13

Number of the ES	: 193
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-L5.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles	
Amounts used	: 1 Tonnes/year
Frequency and duration of use	: Release times per year: 20
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 100% Release fraction to air from process. 100% Release fraction to surface water from process. 5% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity: 240 min/day

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80% ; permeation breakthrough time of: 1 - 4 hour(s)

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC04: Industrial use of processing aids in processes and products, not becoming part of articles

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.048845
Freshwater sediments (mg/kg d.w.) : 0.178662
Marine water (mg/l) : 0.005
Marine water sediments (mg/kg d.w.) : 0.01829
Agricultural soil (mg/kg dwt): 0.009197
Grassland (mg/kg dwt): 0.00864
Sewage Treatment Plant (mg/l) : 0.44482

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 2.743
Inhalation exposure (mg/m³): 61.667
Combined routes (mg/kg bw/day): 11.552

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 194 - Use in wet end (Reactive) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use in wet end (reactive) - Professional - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Process Category: PROC13
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU22
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC06b
Market sector by type of chemical product: PC20, PC23
Environmental contributing scenarios : **ERC06b: Industrial use of reactive processing aids - ERC06b**
Health Contributing scenarios : **PROC13: Treatment of articles by dipping and pouring - PROC13**

Number of the ES	: 194
Industry Association	: TEGEWA
Additional information	: Site 1 + 2
	TEGEWA-L7.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC06b: Industrial use of reactive processing aids	
Further specification	: Specific Environmental Release Category: TEGEWA SPERC Code 6b.1.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 220
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 2% Release fraction to surface water from process. 0% Release fraction to soil from process. 100% Fraction used at main source. 100% Fraction tonnage to region
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: See relevant spERC factsheet.
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Frequency and duration of use : Duration of activity: 240 min/day

Other given operational conditions affecting workers exposure : Indoor

Conditions and measures related to personal protection and hygiene

Personal protection : Wear protective gloves: 80%, permeation breakthrough time of: 1 - 4 hour(s).

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC06b: Industrial use of reactive processing aids

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.085239
 Freshwater sediments (mg/kg d.w.) : 0.311784
 Marine water (mg/l) : 0.00864
 Marine water sediments (mg/kg d.w.) : 0.031602
 Agricultural soil (mg/kg dwt): 0.009682
 Grassland (mg/kg dwt): 0.008642
 Sewage Treatment Plant (mg/l) : 0.808763

Exposure estimation and reference to its source - Workers: PROC13: Treatment of articles by dipping and pouring

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
 Effects: Long term Systemic
 Dermal exposure (mg/kg bw/day): 2.743
 Inhalation exposure (mg/m³): 61.667
 Combined routes (mg/kg bw/day): 11.552

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 195 - Consumer coatings and inks application (Indoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Consumer coatings and inks application - Indoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c
Market sector by type of chemical product: PC09a, PC09b

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix** - ERC08c

Health Contributing scenarios : **PC09a: Coatings and paints, thinners, paint removers** - PC09a
PC09b: Fillers, putties, plasters, modelling clay - PC09b

Number of the ES : 195
Industry Association : CEPE
Additional information : Site 1 + 2

CEPE-AC0801.1, CEPE-AC0301.1/AC0401.1, CEPEAC0901.2, CEPE-AC0103.1, CEPE-AC0801.2, CEPE-AC0101.2, CEPEAC0201.2, CEPE-AC0901.1, CEPE-AC0103.2, CEPE-AC0203.1, CEPEAC0101.1, CEPE-AC0203.2, CEPE-AC0301.2/AC0401.2, CEPEAC0303.1/AC0403.1, CEPE-AC0305/AC0405, CEPE-AC0201.1, CEPEAC0603.2, CEPE-AC0601.1, CEPE-AC0303.2/AC0403.2, CEPEAC0601.2, CEPE-AC0603.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m³/d

Other given operational conditions affecting environmental exposure : 15% Release fraction to air from process.
1% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC09a: Coatings and paints, thinners, paint removers

Further specification	: Product (Sub-)Categories 9a: - Waterborne latex wall paint. - Aerosol spray can. - None assigned. (Film formation - air drying / force drying)
Product characteristics	: spray application
Amounts used	: <u>Waterborne latex wall paint.:</u> Amounts used: 3.750 g per application Product Ingredient Fraction by Weight: 20% Dermal; 20% Inhalation <u>Aerosol spray can:</u> Amounts used: 300 g per application Product Ingredient Fraction by Weight: 20 % Inhalation. <u>film formation:</u> Amounts used: 300g per application. Product Ingredient Fraction by Weight: 90% Dermal; 50% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year <u>Waterborne latex wall paint.:</u> Exposure Duration: 2.2 hour(s) <u>Aerosol spray can - film formation:</u> Exposure Duration: 0.330 hour(s)
Human factors not influenced by risk management	: <u>Waterborne latex wall paint.:</u> skin surface area dermal: Palm of both hands / inside hands / one hand <u>Aerosol spray can:</u> None identified. <u>film formation:</u> skin surface area dermal: Hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC09b: Fillers, putties, plasters, modelling clay**

Further specification	: Product (Sub-)Categories 9a: Plasters and floor equalisers
Product characteristics	: spray application
Amounts used	: Amounts used: 2.50x10 ⁴ g per application. Product Ingredient Fraction by Weight: 20% Dermal; 20% Inhalation
Frequency and duration of use	: Exposure Duration: 2 hour(s) Frequency: Sub-scenario(s) film formation; Application; Equipment cleaning: 1 time(s) per year Sub-scenario(s) Preparation; loading of application equipment: 2 time(s) per year
Human factors not influenced by risk management	: skin surface area dermal: Hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004368
 Freshwater sediments (mg/kg d.w.) : 0.015976
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002021
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Consumers: PC09a: Coatings and paints, thinners, paint removers

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- Application (indoor): coatings from aerosol dispensers
- 2- Preparation of material for application (indoor): batch and indoor
- 3- Application (indoor): Manual Spray - indoor
- 4- waste management: storage of waste prior to disposal
- 5- Equipment cleaning (indoor): indoor
- 6- loading of application equipment (indoor): batch and indoor
- 7- Preparation of material for application (indoor): transfer of material from one container to another - indoor
- 8- Application (indoor): brush/roller - indoor
- 9- loading of application equipment (indoor): transfer of material from one container to another - indoor
- 10- film formation (indoor): force drying (50 - 100 C)
- 11- (indoor) Film formation - air drying - indoor

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day):
 Sub-scenario(s) 2; 4; 5; 6; 7; 8; 9 : 0.03916
 Sub-scenario(s) 10; 11 (film formation) : 0.352397
 Sub-scenario(s) 1; 3: Not applicable.
 Inhalation exposure (mg/m³) :
 Sub-scenario(s) 2; 4; 5; 6; 7; 8; 9 : 1.027
 Sub-scenario(s) 10; 11: 20.548
 Sub-scenario(s) 1; 3 : 8.219
 Oral exposure (mg/kg bw/day): Not applicable.
 Combined routes (mg/kg bw/day):
 Sub-scenario(s) 2; 4; 5; 6; 7; 8; 9 : 0.090801
 Sub-scenario(s) 10; 11 : 0.50732
 Sub-scenario(s) 1; 3 : 0.061969

Exposure estimation and reference to its source - Consumers: PC09b: Fillers, putties, plasters, modelling clay

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):

- 1- Preparation of material for application (indoor): batch and indoor
- 2- Preparation of material for application (indoor): transfer of material from one container to another - indoor
- 3- Application (indoor): brush/roller - indoor
- 4- Equipment cleaning(indoor): indoor
- 5- loading of application equipment (indoor): batch and indoor
- 6- waste management: storage of waste prior to disposal
- 7- loading of application equipment (indoor): transfer of material from one container to another - indoor
- 8- Application (indoor): Manual Spray - indoor
- 9- film formation (indoor): force drying (50 - 100 C)
- 10- (indoor) Film formation - air drying - indoor

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

- Sub-scenario(s) 3; 4; 6 : 0.078311
- Sub-scenario(s) 1; 2; 5; 7 : 0.156621
- Sub-scenario(s) 8; 9; 10 : 0.391553

Inhalation exposure (mg/m³) :

- Sub-scenario(s) 3; 4; 6 : 6.849
- Sub-scenario(s) 1; 2; 5; 7 : 13.699
- Sub-scenario(s) 8; 9; 10 : 34.247

Oral exposure (mg/kg bw/day):

- Sub-scenario(s) 1; 2; 3; 4; 5; 6 ; 7 : Not applicable.
- Sub-scenario(s) 8; 9; 10 : 0.027397

Combined routes (mg/kg bw/day):

- Sub-scenario(s) 3; 4; 6 : 0.391286
- Sub-scenario(s) 1; 2; 5; 7 : 0.782572
- Sub-scenario(s) 8; 9; 10 : 1.984

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 196 - Consumer coatings and inks application (Outdoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Consumer coatings and inks application - Outdoor - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08f
Market sector by type of chemical product: PC09a, PC09b

Environmental contributing scenarios : **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix** - ERC08f

Health Contributing scenarios : **PC09a: Coatings and paints, thinners, paint removers** - PC09a
PC09b: Fillers, putties, plasters, modelling clay - PC09b

Number of the ES : 196
Industry Association : CEPE
Additional information : Site 1 + 2

CEPE-AC0104.1, CEPE-AC0102.2, CEPE-AC0204.1, CEPEAC0102.1, CEPE-AC0302.1/AC0402.1, CEPE-AC0104.2, CEPEAC0202.1, CEPE-AC0802.1, CEPE-AC0204.2, CEPEAC0302.2/AC0402.2, CEPE-AC0304.1/AC0404.1, CEPE-AC0202.2, CEPE-AC0802.2, CEPE-AC0602.1, CEPE-AC0602.2, CEPEAC0304.2/AC0404.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix**

Amounts used : 50 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 15% Release fraction to air from process.
1% Release fraction to surface water from process.
0.5% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC09a: Coatings and paints, thinners, paint removers

Further specification	: Product (Sub-)Categories 9a: Waterborne latex wall paint.
Product characteristics	: spray application
Amounts used	: Amounts used: 3.750 g per application.
	Product Ingredient Fraction by Weight: 20% Dermal; 20% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year <u>Waterborne latex wall paint.:</u> Exposure Duration: 2.2 hour(s) <u>Aerosol spray can - film formation:</u> Exposure Duration: 0.330 hour(s)
Human factors not influenced by risk management	: <u>Waterborne latex wall paint.:</u> skin surface area dermal: Palm of both hands / inside hands / one hand <u>Aerosol spray can:</u> None identified. <u>film formation:</u> skin surface area dermal: Hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC09b: Fillers, putties, plasters, modelling clay**

Further specification	: Product (Sub-)Categories 9a: Plasters and floor equalisers
Product characteristics	: spray application
Amounts used	: Amounts used: 2.50x10 ⁴ g per application.
	Product Ingredient Fraction by Weight: 20% Dermal; 20% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 2 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: Hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004363 Freshwater sediments (mg/kg d.w.) : 0.01596 Marine water (mg/l) : 0.000552 Marine water sediments (mg/kg d.w.) : 0.002019 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 2.44x10 ⁻⁶

Exposure estimation and reference to its source - Consumers: PC09a: Coatings and paints, thinners, paint removers

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
	Product (Sub-)Categories 9a: - Waterborne latex wall paint. - Aerosol spray can. - None assigned. (film formation)
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): Water borne paint : 0.03916 film formation: 0.352397 Aerosol spray can: Not applicable. Inhalation exposure (mg/m ³) : Water borne paint : 1.027 film formation: 20.548 Aerosol spray can: 8.219 Oral exposure (mg/kg bw/day): Not applicable. Combined routes (mg/kg bw/day): Water borne paint: 0.090801 film formation: 0.50732 Aerosol spray can: 0.061969

Exposure estimation and reference to its source - Consumers: PC09b: Fillers, putties, plasters, modelling clay

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
	Product (Sub-)Categories 9a: - Waterborne latex wall paint. - Aerosol spray can. - None assigned. (film formation)
Exposure estimation	: <u>Estimated Exposure Concentrations:</u> Dermal exposure (mg/kg bw/day): Water borne paint : 0.078311 Aerosol spray can - film formation: 0.391553 Inhalation exposure (mg/m ³) : Water borne paint: 6.849 Aerosol spray can film formation: 34.247 Oral exposure (mg/kg bw/day): Water borne paint : Not applicable. Aerosol spray can - film formation: 0.027397 Combined routes (mg/kg bw/day): Water borne paint: 0.391286 Aerosol spray can - film formation: 1.984

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 197 - Wide Dispersive Use in Down the Drain products - hair and skin care products (Consumers and Professionals) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide Dispersive Use in 'Down the Drain' products - hair and skin care products (Consumers and Professionals) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios :

Number of the ES	: 197
Industry Association	: Colipa
Additional information	: Site 1 + 2
	Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: Colipa SPERC Code 8a.1.a.v1
Amounts used	: 5100 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m ³ /d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 100% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.075% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

SILIPON RN6068

ES 197 - Wide Dispersive Use in Down the Drain products - hair and skin care products (Consumers and Professionals) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Contributing scenario controlling consumer exposure for:
Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.005295
Freshwater sediments (mg/kg d.w.) : 0.019369
Marine water (mg/l) : 0.000645
Marine water sediments (mg/kg d.w.) : 0.00236
Agricultural soil (mg/kg dwt): 0.008584
Grassland (mg/kg dwt): 0.008572
Sewage Treatment Plant (mg/l) : 0.009323

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human): : The assessment of human health exposure from the use of cosmetic products is addressed under the Cosmetics regulation and it is not required under REACH regulation.

Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 198 - Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Wide Dispersive Use of Aerosol products for hair and skin care (Non-Propellants) - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios :

Number of the ES	: 198
Industry Association	: Colipa
Additional information	: Site 1 + 2
	Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Further specification	: Specific Environmental Release Category: Colipa SPERC Code 8a.1.c.v1
Amounts used	: 5100 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 100% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.075% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for:
Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.005295
Freshwater sediments (mg/kg d.w.) : 0.019369
Marine water (mg/l) : 0.000645
Marine water sediments (mg/kg d.w.) : 0.00236
Agricultural soil (mg/kg dwt): 0.008584
Grassland (mg/kg dwt): 0.008572
Sewage Treatment Plant (mg/l) : 0.009323

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human): : The assessment of human health exposure from the use of cosmetic products is addressed under the Cosmetics regulation and it is not required under REACH regulation.

Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 199 - Wide Dispersive Use of Aerosol products for hair and skin care (Propellants) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Wide Dispersive Use of Aerosol products for hair and skin care (Propellants) - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios :

Number of the ES	: 47
Industry Association	: Colipa
Additional information	: Site 1 + 2
	Fraction of EU tonnage to region: 0.053 (default: 0.1) End use of cosmetic products

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Further specification	: Specific Environmental Release Category: Colipa SPERC Code 8a.1.b.v1
Amounts used	: 5100 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 100% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.075% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for:
Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008583
Grassland (mg/kg dwt): 0.008572
Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human): : The assessment of human health exposure from the use of cosmetic products is addressed under the Cosmetics regulation and it is not required under REACH regulation.

Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 200 - Consumer Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Consumer Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Sector of end use: SU21

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC08a

Market sector by type of chemical product: PC24

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PC24: Lubricants, greases, release products - PC24**

Number of the ES	: 200
Industry Association	: ATIEL-Group
Additional information	: Site 1 + 2 ATIEL-Group_CC1.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08a: Wide dispersive indoor use of processing aids in open systems**

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

SILIPON RN6068

ES 200 - Consumer Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Contributing scenario controlling consumer exposure for: PC24: Lubricants, greases, release products

Further specification : Product (Sub-)Categories: Sprays

Amounts used : Amounts used (per application): 300 g

Product Ingredient Fraction by Weight: Inhalation: 0.5% ; Dermal: 0.5%

Frequency and duration of use : Frequency: 1 time(s) per day

Exposure Duration: 4 hour(s)

Human factors not influenced by risk management : skin surface area dermal: inside hands / one hand / Palm of both hands

Area of use: : Room volume: 20 m³

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

Freshwater (mg/l) 0.00485

Freshwater sediments (mg/kg d.w.) : 0.017742

Marine water (mg/l) : 0.000601

Marine water sediments (mg/kg d.w.) : 0.002198

Agricultural soil (mg/kg dwt): 0.008578

Grassland (mg/kg dwt): 0.008571

Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Consumers: PC24: Lubricants, greases, release products

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day): 0.357333

Inhalation exposure (mg/m³) : 75

Combined routes (mg/kg bw/day): 7.211

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 201 - Consumer Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways (Outdoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Consumer Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways - Outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08d
Market sector by type of chemical product: PC24

Environmental contributing scenarios : **ERC08d: Wide dispersive outdoor use of processing aids in open systems - ERC08d**

Health Contributing scenarios : **PC24: Lubricants, greases, release products - PC24**

Number of the ES	: 201
Industry Association	: ATIEL-Group
Additional information	: Site 1 + 2 ATIELGroup_CC1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
100% Release fraction to surface water from process.
20% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

SILIPON RN6068

ES 201 - Consumer Application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mould releases, corrosion protection, slideways (Outdoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Contributing scenario controlling consumer exposure for: PC24: Lubricants, greases, release products

Further specification : Product (Sub-)Categories: Sprays

Amounts used : Amounts used (per application): 300 g

Product Ingredient Fraction by Weight: Inhalation: 0.5% ; Dermal: 0.5%

Frequency and duration of use : Frequency: 1 time(s) per day

Exposure Duration: 4 hour(s)

Human factors not influenced by risk management : skin surface area dermal: inside hands / one hand / Palm of both hands

Area of use: : Room volume: 20 m³

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

Freshwater (mg/l) 0.00485

Freshwater sediments (mg/kg d.w.) : 0.017742

Marine water (mg/l) : 0.000601

Marine water sediments (mg/kg d.w.) : 0.002198

Agricultural soil (mg/kg dwt): 0.008578

Grassland (mg/kg dwt): 0.008571

Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Consumers: PC24: Lubricants, greases, release products

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day): 0.357333

Inhalation exposure (mg/m³) : 75

Combined routes (mg/kg bw/day): 7.211

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 202 - Consumer Solvent use, Indoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Solvents - Consumer use - Indoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC01
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios : **PC01: Adhesives, sealants - PC01**

Number of the ES	: 202
Industry Association	: FEICA
Additional information	: Site 1 + 2 FEICA-C1.1.1, FEICA-C1.1.3, FEICA-C1.1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
100% Release fraction to surface water from process.
20% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification : Product (Sub-)Categories:
1- Glues, hobby use
2- Glue from spray
3- Glues DIY-use (carpet glue, tile glue, wood parquet glue)

Amounts used	: 1- Glues, hobby use Amounts used: 9 g Product Ingredient Fraction by Weight: 30% Dermal; 30% Inhalation
	2- Glue from spray Amounts used: 255 g Product Ingredient Fraction by Weight: 4% Dermal; 4% Inhalation
	3- Glues DIY-use (carpet glue, tile glue, wood parquet glue) Amounts used: 1.50x10+4g Product Ingredient Fraction by Weight: 5% Dermal; 5 % Inhalation
Frequency and duration of use	: 1- Glues, hobby use Frequency: 52 time(s) per year Exposure Duration: 4 hour(s)
	2- Glue from spray Frequency: 52 time(s) per year Exposure Duration: 4 hour(s)
	3- Glues DIY-use (carpet glue, tile glue, wood parquet glue) Frequency: 52 time(s) per year Exposure Duration: 6 hour(s)
Human factors not influenced by risk management	: 1- Glues, hobby use skin surface area dermal: fingertips
	2- Glue from spray skin surface area dermal: fingertips
	3- Glues DIY-use (carpet glue, tile glue, wood parquet glue) skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

Freshwater (mg/l) 0.00485
 Freshwater sediments (mg/kg d.w.) : 0.017742
 Marine water (mg/l) : 0.000601
 Marine water sediments (mg/kg d.w.) : 0.002198
 Agricultural soil (mg/kg dwt): 0.008578
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Product (Sub-)Categories

- 1- Glues, hobby use
- 2- Glue from spray
- 3- Glues DIY-use (carpet glue, tile glue, wood parquet glue)

Exposure estimation : Estimated Exposure Concentrations / Product (Sub-)Categories:
Dermal exposure (mg/kg bw/day):
1- 0.254301
2- 0.033907
3- 0.509078
Inhalation exposure (mg/m³) :
1- 0.192329
2- 72.658
3- 53.425
Combined routes (mg/kg bw/day):
1- 0.271878
2- 6.674
3- 7.833

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 203 - Consumer Solvent use, Outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Solvents - Consumer use - Outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08d
Market sector by type of chemical product: PC01
Environmental contributing scenarios : **ERC08d: Wide dispersive outdoor use of processing aids in open systems - ERC08d**
Health Contributing scenarios : **PC01: Adhesives, sealants - PC01**

Number of the ES	: 203
Industry Association	: FEICA
Additional information	: Site 1 + 2 FEICA-C2.1.1, FEICA-C2.1.3, FEICA-C2.1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 100% Release fraction to air from process.
100% Release fraction to surface water from process.
20% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification : Product (Sub-)Categories:
1- Glues, hobby use
2- Glue from spray
3- Glues DIY-use (carpet glue, tile glue, wood parquet glue)

Amounts used	: 1- Glues, hobby use Amounts used: 9 g Product Ingredient Fraction by Weight: 30% Dermal; 30% Inhalation
	2- Glue from spray Amounts used: 255 g Product Ingredient Fraction by Weight: 4% Dermal; 4% Inhalation
	3- Glues DIY-use (carpet glue, tile glue, wood parquet glue) Amounts used: 1.50x10+4g Product Ingredient Fraction by Weight: 5% Dermal; 5 % Inhalation
Frequency and duration of use	: 1- Glues, hobby use Frequency: 52 time(s) per year Exposure Duration: 4 hour(s)
	2- Glue from spray Frequency: 52 time(s) per year Exposure Duration: 4 hour(s)
	3- Glues DIY-use (carpet glue, tile glue, wood parquet glue) Frequency: 52 time(s) per year Exposure Duration: 6 hour(s)
Human factors not influenced by risk management	: 1- Glues, hobby use skin surface area dermal: fingertips
	2- Glue from spray skin surface area dermal: fingertips
	3- Glues DIY-use (carpet glue, tile glue, wood parquet glue) skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08d: Wide dispersive outdoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

Freshwater (mg/l) 0.00485
 Freshwater sediments (mg/kg d.w.) : 0.017742
 Marine water (mg/l) : 0.000601
 Marine water sediments (mg/kg d.w.) : 0.002198
 Agricultural soil (mg/kg dwt): 0.008578
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Product (Sub-)Categories

- 1- Glues, hobby use
- 2- Glue from spray
- 3- Glues DIY-use (carpet glue, tile glue, wood parquet glue)

Exposure estimation : Estimated Exposure Concentrations / Product (Sub-)Categories:
Dermal exposure (mg/kg bw/day):
1- 0.254301
2- 0.033907
3- 0.509078
Inhalation exposure (mg/m³) :
1- 0.192329
2- 72.658
3- 53.425
Combined routes (mg/kg bw/day):
1- 0.271878
2- 6.674
3- 7.833

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 204 - Consumer Use of Fertilizers (Indoor, Open System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer Use of Fertilizers (Indoor,Open System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08b
Market sector by type of chemical product: PC12
Environmental contributing scenarios : **ERC08b: Wide dispersive indoor use of reactive substances in open systems - ERC08b**
Health Contributing scenarios : **PC12: Fertilizers - PC12**

Number of the ES	: 204
Additional information	: Site 1 + 2
	Fe1.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08b: Wide dispersive indoor use of reactive substances in open systems**

Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 0.1% Release fraction to air from process.
2% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: **PC12: Fertilizers**

Further specification : Product (Sub-)Categories: Lawn and garden preparations
Amounts used : Product Ingredient Fraction by Weight: 50% Dermal; 50% Oral
Frequency and duration of use : Frequency: 1 application per day
Human factors not influenced by risk management : skin surface area dermal: Hands

Date of issue/Date of revision : ^(ES Revision date)

837/934

SILIPON RN6068

ES 204 - Consumer Use of Fertilizers (Indoor, Open System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Area of use: : Indoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08b: Wide dispersive indoor use of reactive substances in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004373
Freshwater sediments (mg/kg d.w.) : 0.015994
Marine water (mg/l) : 0.000553
Marine water sediments (mg/kg d.w.) : 0.002023
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000097

Exposure estimation and reference to its source - Consumers: PC12: Fertilizers

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 71.458
Inhalation exposure (mg/m³) : Not applicable.
Oral exposure (mg/kg bw/day): 15
Combined routes (mg/kg bw/day): 86.458

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 205 - Consumer Use of Fertilizers (Outdoor, Open System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer Use of Fertilizers (Outdoor,Open System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08e
Market sector by type of chemical product: PC12
Environmental contributing scenarios : **ERC08e: Wide dispersive outdoor use of reactive substances in open systems** - ERC08e
Health Contributing scenarios : **PC12: Fertilizers** - PC12

Number of the ES : 205
Additional information : Site 1 + 2
Fe1.4 , Fe1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08e: Wide dispersive outdoor use of reactive substances in open systems**

Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 0.1% Release fraction to air from process.
2% Release fraction to surface water from process.
1% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: **PC12: Fertilizers**

Further specification : Product (Sub-)Categories: Lawn and garden preparations
Amounts used : Product Ingredient Fraction by Weight: 50% Dermal; 50% Oral
Frequency and duration of use : Frequency: 1 application per day
Human factors not influenced by risk management : skin surface area dermal: Hands

Date of issue/Date of revision : ^(ES Revision date)

839/934

SILIPON RN6068

ES 205 - Consumer Use of Fertilizers (Outdoor, Open System) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Area of use: : Outdoor

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08e: Wide dispersive outdoor use of reactive substances in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004373
Freshwater sediments (mg/kg d.w.) : 0.015994
Marine water (mg/l) : 0.000553
Marine water sediments (mg/kg d.w.) : 0.002023
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000097

Exposure estimation and reference to its source - Consumers: PC12: Fertilizers

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Estimated Exposure Concentrations:
Effects: Long term Systemic
Dermal exposure (mg/kg bw/day): 71.458
Inhalation exposure (mg/m³) : Not applicable.
Oral exposure (mg/kg bw/day): 15
Combined routes (mg/kg bw/day): 86.458

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 206 - Consumer use as a fuel including use as a solvent in fuel additives, covers refueling and evaporative losses - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Consumer use as a fuel including use as a solvent in fuel additives, covers refueling and evaporative losses - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09a
Market sector by type of chemical product: PC13

Environmental contributing scenarios : **ERC09a: Wide dispersive indoor use of substances in closed systems - ERC09a**

Health Contributing scenarios : **PC13: Fuels - PC13**

Number of the ES	: 206
Industry Association	: Concawe
Additional information	: Site 1 + 2 CONCAWE12C.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC09a: Wide dispersive indoor use of substances in closed systems**

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 9.12c.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0.01% Release fraction to air from process.
0.001% Release fraction to surface water from process.
0.001% Release fraction to soil from process.
0.05% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC13: Fuels

Physical state	: Liquid
Amounts used	: Amounts used: 5000 g per application Product Ingredient Fraction by Weight: 10% Dermal; 10% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09a: Wide dispersive indoor use of substances in closed systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004363 Freshwater sediments (mg/kg d.w.) : 0.015959 Marine water (mg/l) : 0.000552 Marine water sediments (mg/kg d.w.) : 0.002019 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 1.22x10 ⁻⁸

Exposure estimation and reference to its source - Consumers: PC13: Fuels

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.039155 Inhalation exposure (mg/m ³) : 0.684932 Oral exposure (mg/kg bw/day): Not applicable. Combined routes (mg/kg bw/day): 0.10175

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 207 - Consumer use of air freshener products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer use of air freshener products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC03
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios : **PC03: Air care products - PC03**

Number of the ES	: 207
Industry Association	: AISE
Additional information	: Site 1 + 2 AISE-C17, AISE-C18

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Further specification	: Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 100% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.075% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC03: Air care products

Further specification	: Product (Sub-)Categories: 1- Air care, instant action (aerosol sprays) 2- Air care, continuous action (solid and liquid)
Amounts used	: <u>Amounts used</u> : 1- 10 g 2- 50 g Product Ingredient Fraction by Weight: 20% Inhalation (Aerosol spray can; non-aerosol) ; 20% Dermal (non-aerosol)
Frequency and duration of use	: Frequency: 1- 416 time(s) per year 2- 1 time(s) per day Exposure Duration: 1- 0.250 hour(s) 2- 8 hour(s)
Human factors not influenced by risk management	: Product (Sub-)Categories 2 : skin surface area dermal: fingertips
Other given operational conditions affecting consumers exposure	: Product (Sub-)Categories 1 : Ventilation Rate: 40%
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004546 Freshwater sediments (mg/kg d.w.) : 0.016627 Marine water (mg/l) : 0.00057 Marine water sediments (mg/kg d.w.) : 0.002086 Agricultural soil (mg/kg dwt): 0.008573 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Consumers: PC03: Air care products

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : respectively [aerosol; non-aerosol] Dermal exposure (mg/kg bw/day): [Not applicable.; 0.119] Inhalation exposure (mg/m ³) : [68.384; 5] Oral exposure (mg/kg bw/day): [Not applicable.; Not applicable.] Combined routes (mg/kg bw/day): [0.390594; 1.033]

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 208 - Consumer use of formulated lubricants in closed systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Consumer use of formulated lubricants in closed systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Sector of end use: SU21

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC09a

Market sector by type of chemical product: PC01, PC24, PC31

Environmental contributing scenarios : **ERC09a: Wide dispersive indoor use of substances in closed systems - ERC09a**

Health Contributing scenarios : **PC01: Adhesives, sealants - PC01**
PC24: Lubricants, greases, release products - PC24
PC31: Polishes and wax blends - PC31

Number of the ES : 208
Industry Association : Concawe
Additional information : Site 1 + 2

CONCAWE6D.3, CONCAWE6D.1, CONCAWE6D.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC09a: Wide dispersive indoor use of substances in closed systems

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 9.6d.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 1% Release fraction to air from process.
1% Release fraction to surface water from process.
1% Release fraction to soil from process.
0.05% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification	: Product (Sub-)Categories: Glue from spray
Amounts used	: Amounts used: 255 g per application Product Ingredient Fraction by Weight: 10 % Dermal; 10 % Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: fingertips
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC24: Lubricants, greases, release products**

Further specification	: Product (Sub-)Categories: Spray
Amounts used	: Amounts used: 300 g per application Product Ingredient Fraction by Weight: 10 % Dermal; 10 % Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: inside hands / one hand / Palm of both hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC31: Polishes and wax blends**

Further specification	: Product (Sub-)Categories: Polishes, spray (furniture, shoes)
Amounts used	: Amounts used: 135 g per application Product Ingredient Fraction by Weight: 10 % Dermal; 10 % Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09a: Wide dispersive indoor use of substances in closed systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

SILIPON RN6068 *ES 208 - Consumer use of formulated lubricants in closed systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts*

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004364
Freshwater sediments (mg/kg d.w.) : 0.015963
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.00202
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000012

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.00163
Inhalation exposure (mg/m³) : 3.493
Oral exposure (mg/kg bw/day): Not applicable.
Combined routes (mg/kg bw/day): 0.320865

Exposure estimation and reference to its source - Consumers: PC24: Lubricants, greases, release products

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.01958
Inhalation exposure (mg/m³) : 4.11
Oral exposure (mg/kg bw/day): Not applicable.
Combined routes (mg/kg bw/day): 0.395151

Exposure estimation and reference to its source - Consumers: PC31: Polishes and wax blends

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.039155
Inhalation exposure (mg/m³) : 1.849
Oral exposure (mg/kg bw/day): Not applicable.
Combined routes (mg/kg bw/day): 0.208162

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 209 - Consumer use of formulated lubricants in open systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Consumer use of formulated lubricants in open systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC01, PC24, PC31

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PC01: Adhesives, sealants - PC01**
PC24: Lubricants, greases, release products - PC24
PC31: Polishes and wax blends - PC31

Number of the ES	: 209
Industry Association	: Concauwe
Additional information	: Site 1 + 2 CONCAWE6E.1, CONCAWE6E.3, CONCAWE6E.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Further specification	: Specific Environmental Release Category: ESVOC SPERC Code 8.6e.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0.5% Release fraction to air from process. 5% Release fraction to surface water from process. 5% Release fraction to soil from process. 0.05% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification	: Product (Sub-)Categories: Glue from spray
Amounts used	: Amounts used: 255 g per application Product Ingredient Fraction by Weight: 10 % Dermal; 10 % Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: fingertips
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC24: Lubricants, greases, release products**

Further specification	: Product (Sub-)Categories: Spray
Amounts used	: Amounts used: 300 g per application Product Ingredient Fraction by Weight: 10 % Dermal; 10 % Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: inside hands / one hand / Palm of both hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC31: Polishes and wax blends**

Further specification	: Product (Sub-)Categories: Polishes, spray (furniture, shoes)
Amounts used	: Amounts used: 135 g per application Product Ingredient Fraction by Weight: 10 % Dermal; 10 % Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

SILIPON RN6068 *ES 209 - Consumer use of formulated lubricants in open systems including transfer operations, application, operation of engines and similar articles, recycling and disposal of waste oil - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts*

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004369
 Freshwater sediments (mg/kg d.w.) : 0.015981
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002021
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000061

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.00163
 Inhalation exposure (mg/m³) : 3.493
 Oral exposure (mg/kg bw/day): Not applicable.
 Combined routes (mg/kg bw/day): 0.320865

Exposure estimation and reference to its source - Consumers: PC24: Lubricants, greases, release products

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.01958
 Inhalation exposure (mg/m³) : 4.11
 Oral exposure (mg/kg bw/day): Not applicable.
 Combined routes (mg/kg bw/day): 0.395151

Exposure estimation and reference to its source - Consumers: PC31: Polishes and wax blends

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
 Dermal exposure (mg/kg bw/day): 0.039155
 Inhalation exposure (mg/m³) : 1.849
 Oral exposure (mg/kg bw/day): Not applicable.
 Combined routes (mg/kg bw/day): 0.208162

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 210 - Consumer use of fuel additives and additised fuels - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer use of fuel additives and additised fuels - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC07
Market sector by type of chemical product: PC13
Environmental contributing scenarios : **ERC07: Industrial use of substances in closed systems - ERC07**
Health Contributing scenarios : **PC13: Fuels - PC13**

Number of the ES	: 210
Additional information	: Site 1 + 2 ATC-Group_KC.1.1, ATC-Group_KC.2.1, ATC-Group_KC.5.1, ATCGroup_KC.4.1, ATC-Group_KC.3.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC07: Industrial use of substances in closed systems**

Amounts used : 40 Tonnes/year
Frequency and duration of use : Release times per year: 20
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 5% Release fraction to air from process.
5% Release fraction to surface water from process.
5% Release fraction to soil from process.
100% Fraction used at main source.
100% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: **PC13: Fuels**

Physical state : Liquid
Amounts used : Amounts used: 5000 g per application
Product Ingredient Fraction by Weight: 3% Dermal; 3% Inhalation
Frequency and duration of use : Frequency: 1 time(s) per year
Exposure Duration: 4 hour(s)

SILIPON RN6068	ES 210 - Consumer use of fuel additives and additised fuels - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
Exposure estimation and reference to its source - Environment: ERC07: Industrial use of substances in closed systems	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.093327 Freshwater sediments (mg/kg d.w.) : 0.341366 Marine water (mg/l) : 0.009448 Marine water sediments (mg/kg d.w.) : 0.03456 Agricultural soil (mg/kg dwt): 0.009824 Grassland (mg/kg dwt): 0.008709 Sewage Treatment Plant (mg/l) : 0.889639
Exposure estimation and reference to its source - Consumers: PC13: Fuels	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 4.287 Inhalation exposure (mg/m ³) : 75 Oral exposure (mg/kg bw/day): Not applicable. Combined routes (mg/kg bw/day): 11.142

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 211 - Consumer use of fuel additives and additised fuels (WDU, Indoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer use of fuel additives and additised fuels - Indoor Wide Dispersive Use (WDU) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09a
Market sector by type of chemical product: PC13
Environmental contributing scenarios : **ERC09a: Wide dispersive indoor use of substances in closed systems - ERC09a**
Health Contributing scenarios : **PC13: Fuels - PC13**

Number of the ES	: 211
Processes and activities covered by the exposure scenario	: Wide Dispersive Use (WDU)
Additional information	: Site 1 + 2 ATC-Group_KC.4.2, ATC-Group_KC.2.2, ATCGroup_KC.5.2, ATC-Group_KC.3.2, ATC-Group_KC.1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC09a: Wide dispersive indoor use of substances in closed systems**

Amounts used	: 1000Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 5% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC13: Fuels

Physical state	: Liquid
Amounts used	: Amounts used: 5000 g per application Product Ingredient Fraction by Weight: 3% Dermal; 3% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09a: Wide dispersive indoor use of substances in closed systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004363 Freshwater sediments (mg/kg d.w.) : 0.015959 Marine water (mg/l) : 0.000552 Marine water sediments (mg/kg d.w.) : 0.002019 Agricultural soil (mg/kg dwt): 0.008583 Grassland (mg/kg dwt): 0.008572 Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Consumers: PC13: Fuels

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 4.287 Inhalation exposure (mg/m ³) : 75 Oral exposure (mg/kg bw/day): Not applicable. Combined routes (mg/kg bw/day): 11.142

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 212 - Consumer use of fuel additives and additised fuels (WDU, Outdoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer use of fuel additives and additised fuels - Outdoor Wide Dispersive Use (WDU) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09b
Market sector by type of chemical product: PC13
Environmental contributing scenarios : **ERC09b: Wide dispersive outdoor use of substances in closed systems - ERC09b**
Health Contributing scenarios : **PC13: Fuels - PC13**

Number of the ES : 212
Processes and activities covered by the exposure scenario : Wide Dispersive Use (WDU)
Additional information : Site 1 + 2
ATC-Group_KC.5.3, ATC-Group_KC.1.3, ATCGroup_KC.3.3, ATC-Group_KC.2.3, ATC-Group_KC.4.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC09b: Wide dispersive outdoor use of substances in closed systems**

Amounts used : 100 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 5% Release fraction to air from process.
5% Release fraction to surface water from process.
5% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC13: Fuels

Physical state	: Liquid
Amounts used	: Amounts used: 5000 g per application Product Ingredient Fraction by Weight: 3% Dermal; 3% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09b: Wide dispersive outdoor use of substances in closed systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004365 Freshwater sediments (mg/kg d.w.) : 0.015968 Marine water (mg/l) : 0.000552 Marine water sediments (mg/kg d.w.) : 0.00202 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.000024

Exposure estimation and reference to its source - Consumers: PC13: Fuels

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 4.287 Inhalation exposure (mg/m ³) : 75 Oral exposure (mg/kg bw/day): Not applicable. Combined routes (mg/kg bw/day): 11.142

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 213 - Consumer use of pest control products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer use of pest control products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios :

Number of the ES : 213
Additional information : Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

**Contributing scenario controlling consumer exposure for:
Conditions and measures related to personal protection and hygiene**

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004546
 Freshwater sediments (mg/kg d.w.) : 0.016627
 Marine water (mg/l) : 0.00057
 Marine water sediments (mg/kg d.w.) : 0.002086
 Agricultural soil (mg/kg dwt): 0.008573
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human): : Not available.

Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 214 - Consumer use of polishes - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer use of polishes - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC31
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios : **PC31: Polishes and wax blends - PC31**

Number of the ES : 214
Additional information : Site 1 + 2
AISE-C20.2, AISE-C20.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08a: Wide dispersive indoor use of processing aids in open systems**

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: **PC31: Polishes and wax blends**

Further specification : **Product (Sub-)Categories:**
1- Polishes, spray (furniture, shoes)
2- Polishes, wax/cream (floor, furniture, shoes)
Amounts used : **Amounts used / Product (Sub-)Categories:**
1- 135 g per application
2- 550 g per application
Product Ingredient Fraction by Weight: 20% Dermal; 20% Inhalation

Date of issue/Date of revision : ^(ES Revision date)

860/934

SILIPON RN6068	ES 214 - Consumer use of polishes - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Frequency and duration of use	: Frequency of exposure / Product (Sub-)Categories: 1- 26 time(s) per year 2- 1 time(s) per day Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Other given operational conditions affecting consumers exposure	: Product (Sub-)Categories 1 : Ventilation Rate: 40%
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
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Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004546 Freshwater sediments (mg/kg d.w.) : 0.016627 Marine water (mg/l) : 0.00057 Marine water sediments (mg/kg d.w.) : 0.002086 Agricultural soil (mg/kg dwt): 0.008573 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Consumers: PC31: Polishes and wax blends	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 0.039155 Inhalation exposure (mg/m ³) : 1.849 Oral exposure (mg/kg bw/day): Not applicable. Combined routes (mg/kg bw/day): 0.208162

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 215 - Consumer use of the substance for the treatment of water in open and closed systems - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer use of the substance for the treatment of water in open and closed systems - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08f
Environmental contributing scenarios : **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix - ERC08f**
Health Contributing scenarios :

Number of the ES : 215
Additional information : Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix**

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 8.22c.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 1% Release fraction to air from process.
99% Release fraction to surface water from process.
0% Release fraction to soil from process.
1.46% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.007886
 Freshwater sediments (mg/kg d.w.) : 0.028845
 Marine water (mg/l) : 0.0000904
 Marine water sediments (mg/kg d.w.) : 0.003308
 Agricultural soil (mg/kg dwt): 0.008619
 Grassland (mg/kg dwt): 0.008574
 Sewage Treatment Plant (mg/l) : 0.03523

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human): : Not available.

Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 216 - Consumer use of washing and cleaning products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Consumer use of washing and cleaning products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PC35: Washing and cleaning products (including solvent based products) - PC35**

Number of the ES : 216

Additional information : Site 1 + 2

AISE-C11.1, AISE-C6, AISE-C1, AISE-C2, AISE-C5, AISE-C9, AISE-C3.1, AISE-C8.1, AISE-C21, AISE-C10.1, AISE-C22.1, AISE-C7.1, AISE-C13, AISE-C3.2, AISE-C15, AISE-C14, AISE-C12

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC35: Washing and cleaning products (including solvent based products)

Further specification	: Product (Sub-)Categories: 1- Cleaners, liquid (all purpose cleaners, etc) 2- Laundry and dish-washing products
Amounts used	: <u>Applied amount</u> : 1- 250 g (Cleaners, liquid (all purpose cleaners, etc)) 2- 50 g (Laundry and dish washing products) <u>Product Ingredient Fraction by Weight</u> : 20% Dermal; 20% Inhalation
Frequency and duration of use	: <u>Frequency</u> : 1 time(s) per day <u>Exposure Duration</u> : Product (Sub-)Categories 1: 0.330 hour(s) Product (Sub-)Categories 2 : 1 hour(s)
Human factors not influenced by risk management	: Exposed skin surface: hands
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004546 Freshwater sediments (mg/kg d.w.) : 0.016627 Marine water (mg/l) : 0.00057 Marine water sediments (mg/kg d.w.) : 0.002086 Agricultural soil (mg/kg dwt): 0.008573 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Consumers: PC35: Washing and cleaning products (including solvent based products)

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Product (Sub-)Categories: Cleaners, liquid (all purpose cleaners, etc) Dermal exposure (mg/kg bw/day): 28.583 Inhalation exposure (mg/m ³) : 25 Combined routes (mg/kg bw/day): 28.772 Product (Sub-)Categories: Laundry and dish-washing products Dermal exposure (mg/kg bw/day) : 28.583 Inhalation exposure (mg/m ³): 5 Combined routes (mg/kg bw/day) : 28.698

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 216 - Consumer use of washing and cleaning products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 217 - Consumer use of washing and cleaning products (Reactive) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer use of washing and cleaning products (reactive) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08b
Market sector by type of chemical product: PC35
Environmental contributing scenarios : **ERC08b: Wide dispersive indoor use of reactive substances in open systems** - ERC08b
Health Contributing scenarios : **PC35: Washing and cleaning products (including solvent based products)** - PC35

Number of the ES : 217
Additional information : Site 1 + 2
AISE-C8.4, AISE-C4, AISE-C8.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08b: Wide dispersive indoor use of reactive substances in open systems**

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.a.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: **PC35: Washing and cleaning products (including solvent based products)**

Further specification : **Product (Sub-)Categories:**
1- Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)
2- Laundry and dish-washing products
3- Cleaners, liquid (all purpose cleaners, etc)

Amounts used	: <u>Applied amount / Sub-scenario(s)</u> : 1- 35 g 2- 50 g 3- 250g
Frequency and duration of use	: <u>Product Ingredient Fraction by Weight</u> : 20% Inhalation; 20% Dermal : <u>Frequency / Product (Sub-)Categories</u> : 1- 52 time(s) per year 2; 3- 1 time(s) per day : <u>Exposure Duration</u> : 1- 4 hour(s) 2- 1 hour(s) 3- 0.330 hour(s)
Human factors not influenced by risk management	: Exposed skin surface: hands
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08b: Wide dispersive indoor use of reactive substances in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004546
Freshwater sediments (mg/kg d.w.) : 0.016627
Marine water (mg/l) : 0.00057
Marine water sediments (mg/kg d.w.) : 0.002086
Agricultural soil (mg/kg dwt): 0.008573
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Consumers: PC35: Washing and cleaning products (including solvent based products)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

Product (Sub-)Categories: Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)
Dermal exposure (mg/kg bw/day): 4.072
Inhalation exposure (mg/m³) : 49.863
Combined routes (mg/kg bw/day): 8.629

Product (Sub-)Categories: Laundry and dish-washing products
Dermal exposure (mg/kg bw/day): 28.583
Inhalation exposure (mg/m³): 5
Combined routes (mg/kg bw/day): 28.698

Product (Sub-)Categories: Cleaners, liquid (all purpose cleaners, etc)
Dermal exposure (mg/kg bw/day): 28.583
Inhalation exposure (mg/m³): 25
Combined routes (mg/kg bw/day): 28.772

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 218 - Consumer use of washing and cleaning products (Sprays) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Consumer use of washing and cleaning products (Sprays) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC35
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems** - ERC08a
Health Contributing scenarios : **PC35: Washing and cleaning products (including solvent based products)** - PC35

Number of the ES : 218
Additional information : Site 1 + 2
AISE-C7.2, AISE-C22.2, AISE-C11.2, AISE-C8.2, AISE-C10.2, AISE-C16

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08a: Wide dispersive indoor use of processing aids in open systems**

Further specification : Specific Environmental Release Category: AISE SPERC Code 8a.1.b.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
100% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.075% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: **PC35: Washing and cleaning products (including solvent based products)**

Further specification : Product (Sub-)Categories: Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)
Sub-scenario(s):
1- Wipes
2- Carpet detergents
3- Automotive Care

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Amounts used	4- Toilet Cleaners 5- Oven Cleaners 6- Surface Cleaners : <u>Sub-scenario(s) - Applied amount:</u> 1- 7 g 2; 3; 4; 5; 6- 35 g
Frequency and duration of use	<u>Sub-scenario(s) - Product Ingredient Fraction by Weight:</u> 20% Inhalation; 20% Dermal : <u>Sub-scenario(s) / Frequency (time(s) per year):</u> 1- 365 2- 10 3- 26 4- 52 5- 26 6- 104
Human factors not influenced by risk management	: <u>Exposure Duration:</u> 4 hour(s) : Exposed skin surface: hands
Other given operational conditions affecting consumers exposure	: Sub-scenario(s) 1; 3; 4; 5; 6: Ventilation Rate: 40%
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004546
 Freshwater sediments (mg/kg d.w.) : 0.016627
 Marine water (mg/l) : 0.00057
 Marine water sediments (mg/kg d.w.) : 0.002086
 Agricultural soil (mg/kg dwt): 0.008573
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.001828

Exposure estimation and reference to its source - Consumers: PC35: Washing and cleaning products (including solvent based products)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Sub-scenario(s):
 1- Wipes
 2- Carpet detergents
 3- Automotive Care
 4- Toilet Cleaners
 5- Oven Cleaners
 6- Surface Cleaners

Exposure estimation : Estimated Exposure Concentrations:

Sub-scenario(s):

Dermal exposure (mg/kg bw/day):

1- 28.583

2- 0.783105

3- 2.036

4- 4.072

5- 2.036

6- 8.144

Inhalation exposure (mg/m³) :

1- 70

2- 9.589

3- 24.932

4- 49.863

5- 24.932

6- 59.836

Combined routes (mg/kg bw/day):

1- 34.981

2- 1.659

3- 4.315

4- 8.629

5- 4.315

6- 13.613

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**Environment** : Not available.**Health** : Not available.**Additional good practice advice beyond the REACH CSA****Environment** : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 219 - Use as co-formulant in liquid Plant Protection Products - foliar application by amateurs, outdoor - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use as co-formulant in liquid Plant Protection Products (PPPs) - foliar application by amateurs, Outdoor - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios :

Number of the ES	: 219
Industry Association	: ECPA
Additional information	: Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification	: Specific Environmental Release Category: ECPA SPERC Code 8d.2.v1
Amounts used	: 1,000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 100% Release fraction to water from process: 0% Release fraction to soil from process: 0% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for:

Further specification	: - PC: Other: ECPA OWB
	For liquid PPPs, the highest exposure potential is associated with application by hand-held spraying to high targets (e.g., orchards). The ES covers the mixing and loading (M&L) of the liquid preparation into the spray tank and the application of the spray using a knapsack sprayer. The use of PPPs is assessed for non-professional users. PPP use by amateurs will be less frequent (once or twice per year rather than on more than ten days per season) and on a much smaller scale (200 m ² rather than 10,000 m ²) than by professionals. However, they will not have access to PPE.
Concentration of substance in mixture or article	: - Concentration of substance in preparation: up to 99% (Maximum value for a co-formulant (e.g., Solvent)) - Concentration after dilution for use (if relevant): up to 1% (typical dilution 1:100)
Physical state	: Liquid
Amounts used	: Used amount of substance (as such or in preparation) per application: 0.02 kg/day
Frequency and duration of use	: - Frequency of exposure (for one consumer): 1 - 2 time(s) per year (hobby gardener) - Duration of exposure per day: 1 hours per day (hobby gardener)
Human factors not influenced by risk management	: - Area of skin contact with the substance: 19 400 cm ² (whole body is potentially exposed) - Mouth contact area: Not relevant. - Body weight: 60 kg (Default for consumers)
Other given operational conditions affecting consumers exposure	: - Room size: Not applicable. (Outdoor use) - Respiration volume under conditions of use: 20 m ³ / day
Conditions and measures related to information and behavioural advice to consumers	: Risk management measures (RMM) related to the design of product: child-resistant closures
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source**Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems**

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004363 Freshwater sediments (mg/kg d.w.) : 0.015959 Marine water (mg/l) : 0.000552 Marine water sediments (mg/kg d.w.) : 0.002019 Agricultural soil (mg/kg dwt): 0.008583 Grassland (mg/kg dwt): 0.008572 Sewage Treatment Plant (mg/l): 0

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human): : Calculation tool used: ECPA OWB
Effects: Long term Systemic

Exposure estimation : PROC: Other: ECPA OWB
: Oral exposure
Exposure concentration: Not applicable.

Dermal exposure
Exposure concentration: 0.206 mg/kg bw/day

Inhalation exposure
Exposure concentration: 0.0009 mg/m³

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 220 - Exposure of re-entry workers following foliar application and bystanders via spray drift - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Exposure of re-entry workers following foliar application - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.

Environmental contributing scenarios :

Health Contributing scenarios :

Number of the ES	: 220
Industry Association	: ECPA
Additional information	: Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for:

Further specification : Environmental exposure is either not applicable or sufficiently covered by the Scenarios ES76 and ES77.

Contributing scenario controlling consumer exposure for:

Further specification : - PROC: Other: ECPA OWB

- Sub-scenario(s):

1- Exposure of re-entry workers following foliar application.

Workers re-entering treated cultures are potentially exposed to dislodgeable foliar residues (DFR). The only significant potential for worker exposure following re-entry will be contamination via the skin. Risk of inhalation exposure is negligible.

2- Exposure of bystanders via spray drift

The following definitions and assumptions for bystanders may be applied.

Bystanders are persons:

- who are located within or directly adjacent to the area where pesticide application or treatment is in process or has taken place
- whose presence is quite incidental and unrelated to work involving pesticides but whose position may put them at risk of exposure
- who take no action to avoid or control exposure
- that do not wear protective clothing and perhaps only light ordinary clothing

Physical state : - Sub-scenarios 1:
Solid (dried liquid spray)

Amounts used : - Sub-scenario(s) 1:
- Used amount of substance (as such or in preparation) per worker (workplace) per day: dislodgeable foliar residue (DFR)

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Frequency and duration of use	: - Sub-scenario(s) 1: - Frequency of exposure at workplace (for one worker): 1-10 times per season (Operators may encounter the substance up to 10 time(s) per year) - Duration of exposure per day at workplace (for one worker): 8 hours per day
Human factors not influenced by risk management	: - Area of skin contact with the substance under conditions of use: 19,400 cm ² (whole body is potentially exposed) - Body weight: - Sub-scenario(s) 1: 70 kg (Default for workers) - Sub-scenario(s) 2: 60 kg (Default for general public)
Other given operational conditions affecting consumers exposure	: - Room size: Not applicable. (Outdoor use) - Respiration volume under conditions of use: - Sub-scenario(s) 1: 10 m ³ / day (Light work) - Sub-scenario(s) 2: 20 m ³ / day (General public)
Area of use:	: Outdoor
Conditions and measures related to information and behavioural advice to consumers	: Risk management measures (RMM) Sub-scenario(s) 1: None
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment:

Exposure assessment (environment):	: Environmental exposure is either not applicable or sufficiently covered by the Scenarios ES76 and ES77.
Exposure estimation	: Not available.

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human):	: Calculation tool used: ECPA OWB Effects: Long term Systemic PROC: Other: ECPA OWB
Exposure estimation	: - <u>Sub-scenarios:</u> 1- Exposure of re-entry workers following foliar application 2- Exposure of bystanders via spray drift <u>Dermal exposure</u> Exposure concentration (mg/kg bw/day): - Sub-scenario(s) 1: 1.143 - Sub-scenario(s) 2: 0.197 <u>Inhalation exposure</u> Exposure concentration (mg/m ³): - Sub-scenario(s) 1: Not relevant. - Sub-scenario(s) 2: 0.0152 <u>Oral exposure</u> Exposure concentration (mg/kg bw/day): - Sub-scenario(s) 2: Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

SILIPON RN6068

ES 220 - Exposure of re-entry workers following foliar application and bystanders via spray drift - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 221 - Wide dispersive Use of Solvents in Building Construction Adhesives for indoor application - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Solvents in Building Construction Adhesives for indoor application - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix** - ERC08c

Health Contributing scenarios : **PC01: Adhesives, sealants** - PC01

Number of the ES	: 221
Industry Association	: FEICA
Additional information	: Site 1 + 2
	FEICA-P3.3, FEICAC3.3.2, FEICA-C3.3.3, FEICA-C3.3.1, FEICA-C4.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: FEICA SPERC Code 8c.2a.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 98% Release fraction to air from process. 1% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification : Product (Sub-)Categories:
1- Glues DIY-use (carpet glue, tile glue, wood parquet glue)
2- Glue from spray
3- Glues, hobby use
4- Sealants

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Amounts used : Amounts used per application:
1- 1.50x10+4 g
2- 255 g
3- 9 g
4- 390 g

Product Ingredient Fraction by Weight
respectively [Dermal; Inhalation]

1- [5%; 5%]
2- [4%; 4%]
3- [30%; 30%]
4- [30%; 30%]

Frequency and duration of use : Frequency: 52 time(s) per year

Exposure Duration:

1- 6 hour(s)
2; 3; 4- 4 hour(s)

Human factors not influenced by risk management : skin surface area dermal:
1- hands
2- fingertips
3- fingertips
4- fingertips

Area of use: : Room volume: 20 m³

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004368
Freshwater sediments (mg/kg d.w.) : 0.015976
Marine water (mg/l) : 0.000553
Marine water sediments (mg/kg d.w.) : 0.002021
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Product (Sub-)Categories:

- 1- Glues DIY-use (carpet glue, tile glue, wood parquet glue)
- 2- Glue from spray
- 3- Glues, hobby use
- 4- Sealants

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

- 1- 0.509078
- 2- 0.033907
- 3- 0.254301
- 4- 0.254301

Inhalation exposure (mg/m³) :

- 1- 53.425
- 2- 72.658
- 3- 0.192329
- 4- 8.334

Combined routes (mg/kg bw/day) :

- 1- 7.833
- 2- 6.674
- 3- 0.271878
- 4- 1.016

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 222 - Wide dispersive Use of Solvents in Building Construction Adhesives for outdoor application - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Solvents in Building Construction Adhesives for outdoor application - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08f
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix** - ERC08f

Health Contributing scenarios : **PC01: Adhesives, sealants** - PC01

Number of the ES	: 222
Industry Association	: FEICA
Additional information	: Site 1 + 2
	FEICA-P4.2, FEICAC5.2.1, FEICA-C5.2.2, FEICA-C5.2.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: FEICA SPERC Code 8f.2.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 98% Release fraction to air from process. 1% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification	: Product (Sub-)Categories: 1- Glues DIY-use (carpet glue, tile glue, wood parquet glue) 2- Glue from spray 3- Glues, hobby use
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 20%.
Amounts used	: Amounts used per application: 1- 1.50x10 ⁺⁴ g 2- 255 g 3- 9 g Product Ingredient Fraction by Weight respectively [Dermal; Inhalation] 1- [5%; 5%] 2- [4%; 4%] 3- [30%; 30%]
Frequency and duration of use	: Frequency: 52 time(s) per year Exposure Duration: 1- 6 hour(s) 2; 3- 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: 1- hands 2- fingertips 3- fingertips
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004368 Freshwater sediments (mg/kg d.w.) : 0.015976 Marine water (mg/l) : 0.000553 Marine water sediments (mg/kg d.w.) : 0.002021 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
	: <u>Product (Sub-)Categories</u> : 1- Glues DIY-use (carpet glue, tile glue, wood parquet glue) 2- Glue from spray 3- Glues, hobby use

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

1- 0.509078

2- 0.033907

3- 0.254301

Inhalation exposure (mg/m³) :

1- 53.425

2- 72.658

3- 0.192329

Combined routes (mg/kg bw/day) :

1- 7.833

2- 6.674

3- 0.271878

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**Environment** : Not available.**Health** : Not available.**Additional good practice advice beyond the REACH CSA****Environment** : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 223 - Wide dispersive Use of Solvents in Professional and DIY Adhesives - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Wide dispersive Use of Solvents in Building Construction Adhesives for indoor application - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c
Market sector by type of chemical product: PC01
Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix - ERC08c**
Health Contributing scenarios : **PC01: Adhesives, sealants - PC01**

Number of the ES	: 223
Industry Association	: FEICA
Processes and activities covered by the exposure scenario	: Professional and Do it yourself products.
Additional information	: Site 1 + 2 FEICA-P3.4, FEICA-C3.4.2, FEICAC4.4, FEICA-C3.4.1, FEICA-C3.4.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: FEICA SPERC Code 8c.2b.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 98.5% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification : Product (Sub-)Categories:
1- Glues DIY-use (carpet glue, tile glue, wood parquet glue)
2- Glue from spray
3- Glues, hobby use
4- Sealants

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Amounts used : Amounts used per application:
1- 1.50x10+4 g
2- 255 g
3- 9 g
4- 390 g

Product Ingredient Fraction by Weight
respectively [Dermal; Inhalation]
1- [5%; 5%]
2- [4%; 4%]
3- [30%; 30%]
4- [30%; 30%]

Frequency and duration of use : Frequency: 52 time(s) per year

Exposure Duration:
1- 6 hour(s)
2; 3; 4- 4 hour(s)

Human factors not influenced by risk management : skin surface area dermal:
1- hands
2- fingertips
3- fingertips
4- fingertips

Area of use: : Room volume: 20 m³

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004363
Freshwater sediments (mg/kg d.w.) : 0.015959
Marine water (mg/l) : 0.000552
Marine water sediments (mg/kg d.w.) : 0.002019
Agricultural soil (mg/kg dwt): 0.008989
Grassland (mg/kg dwt): 0.009354
Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Product (Sub-)Categories:

- 1- Glues DIY-use (carpet glue, tile glue, wood parquet glue)
- 2- Glue from spray
- 3- Glues, hobby use
- 4- Sealants

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

- 1- 0.509078
- 2- 0.033907
- 3- 0.254301
- 4- 0.354301

Inhalation exposure (mg/m³) :

- 1- 53.425
- 2- 72.658
- 3- 0.192329
- 4- 8.334

Combined routes (mg/kg bw/day) :

- 1- 7.833
- 2- 6.674
- 3- 0.271878
- 4- 1.016

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 224 - Wide dispersive Use of Substances other than Solvents in Building Construction Adhesives for indoor application - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Substances other than Solvents in Building Construction Adhesives for indoor application - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix** - ERC08c

Health Contributing scenarios : **PC01: Adhesives, sealants** - PC01

Number of the ES	: 96b
Industry Association	: FEICA
Additional information	: Site 1 + 2 FEICA-P3.1, FEICA-C3.1.2, FEICA-C3.1.3, FEICA-C3.1.1, FEICAC4.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Further specification : Specific Environmental Release Category:
FEICA SPERC Code 8c.1a.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
1.5% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification : Product (Sub-)Categories:
 1- Glues DIY-use (carpet glue, tile glue, wood parquet glue)
 2- Glue from spray
 3- Glues, hobby use
 4- Sealants

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Amounts used : Amounts used per application:
 1- 1.50x10+4 g
 2- 255 g
 3- 9 g
 4- 390 g

Product Ingredient Fraction by Weight respectively [Dermal; Inhalation]

1- [5%; 5%]
 2- [4%; 4%]
 3- [30%; 30%]
 4- [30%; 30%]

Frequency and duration of use : Frequency: 52 time(s) per year

Exposure Duration:

1- 6 hour(s)
 2; 3; 4- 4 hour(s)

Human factors not influenced by risk management : skin surface area dermal:
 1- hands
 2- fingertips
 3- fingertips
 4- fingertips

Area of use: : Room volume: 20 m³

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004368
 Freshwater sediments (mg/kg d.w.) : 0.015976
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002021
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Product (Sub-)Categories:

- 1- Glues DIY-use (carpet glue, tile glue, wood parquet glue)
- 2- Glue from spray
- 3- Glues, hobby use
- 4- Sealants

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

- 1- 0.509078
- 2- 0.033907
- 3- 0.254301
- 4- 0.354301

Inhalation exposure (mg/m³) :

- 1- 53.425
- 2- 72.658
- 3- 0.192329
- 4- 8.334

Combined routes (mg/kg bw/day) :

- 1- 7.833
- 2- 6.674
- 3- 0.271878
- 4- 1.016

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 225 - Wide dispersive Use of Substances other than Solvents in Building Construction Adhesives for outdoor application - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Substances other than Solvents in Building Construction Adhesives for outdoor application - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08f
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix** - ERC08f

Health Contributing scenarios : **PC01: Adhesives, sealants** - PC01

Number of the ES	: 97b
Industry Association	: FEICA
Additional information	: Site 1 + 2 FEICA-P4.1, FEICA-C5.1.1, FEICA-C5.1.2, FEICA-C5.1.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Further specification : Specific Environmental Release Category:
FEICA SPERC Code 8f.1.v1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 0% Release fraction to air from process.
1.5% Release fraction to surface water from process.
0% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification : Product (Sub-)Categories:
 1- Glues DIY-use (carpet glue, tile glue, wood parquet glue)
 2- Glue from spray
 3- Glues, hobby use

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Amounts used : Amounts used per application:
 1- 1.50x10+4 g
 2- 255 g
 3- 9 g

Product Ingredient Fraction by Weight respectively [Dermal; Inhalation]
 1- [5%; 5%]
 2- [4%; 4%]
 3- [30%; 30%]

Frequency and duration of use : Frequency: 52 time(s) per year

Exposure Duration:
 1- 6 hour(s)
 2; 3- 4 hour(s)

Human factors not influenced by risk management : skin surface area dermal:
 1- hands
 2- fingertips
 3- fingertips

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.00437
 Freshwater sediments (mg/kg d.w.) : 0.015985
 Marine water (mg/l) : 0.000553
 Marine water sediments (mg/kg d.w.) : 0.002022
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000073

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Product (Sub-)Categories:
 1- Glues DIY-use (carpet glue, tile glue, wood parquet glue)
 2- Glue from spray
 3- Glues, hobby use

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

1- 0.509078

2- 0.033907

3- 0.254301

Inhalation exposure (mg/m³) :

1- 53.425

2- 72.658

3- 0.192329

Combined routes (mg/kg bw/day) :

1- 7.833

2- 6.674

3- 0.271878

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**Environment** : Not available.**Health** : Not available.**Additional good practice advice beyond the REACH CSA****Environment** : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 226 - Wide dispersive Use of Substances other than Solvents in Professional and DIY Adhesives - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive Use of Substances other than Solvents in Professional and DIY Adhesives - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: In a mixture
Sector of end use: SU10
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c
Market sector by type of chemical product: PC01

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix** - ERC08c

Health Contributing scenarios : **PC01: Adhesives, sealants** - PC01

Number of the ES	: 98b
Industry Association	: FEICA
Processes and activities covered by the exposure scenario	: Professional and Do it yourself products.
Additional information	: Site 1 + 2 FEICA-P3.2, FEICA-C4.2, FEICA-C3.2.3, FEICA-C3.2.1, FEICA-C3.2.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: FEICA SPERC Code 8c.1b.v1
Amounts used	: 1 000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 0.9% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification : Product (Sub-)Categories:
 1- Glues DIY-use (carpet glue, tile glue, wood parquet glue)
 2- Glue from spray
 3- Glues, hobby use
 4- Sealants

Concentration of substance in mixture or article : Substance is in preparations. (Inhalation): 20%.

Amounts used : Amounts used per application:
 1- 1.50x10+4 g
 2- 255 g
 3- 9 g
 4- 390 g

Product Ingredient Fraction by Weight respectively [Dermal; Inhalation]

1- [5%; 5%]
 2- [4%; 4%]
 3- [30%; 30%]
 4- [30%; 30%]

Frequency and duration of use : Frequency: 52 time(s) per year

Exposure Duration:

1- 6 hour(s)
 2; 3; 4- 4 hour(s)

Human factors not influenced by risk management : skin surface area dermal:
 1- hands
 2- fingertips
 3- fingertips
 4- fingertips

Area of use: : Room volume: 20 m³

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004367
 Freshwater sediments (mg/kg d.w.) : 0.015975
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002021
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.000044

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Product (Sub-)Categories:

- 1- Glues DIY-use (carpet glue, tile glue, wood parquet glue)
- 2- Glue from spray
- 3- Glues, hobby use
- 4- Sealants

Exposure estimation : Estimated Exposure Concentrations:

Dermal exposure (mg/kg bw/day):

- 1- 0.509078
- 2- 0.033907
- 3- 0.254301
- 4- 0.354301

Inhalation exposure (mg/m³) :

- 1- 53.425
- 2- 72.658
- 3- 0.192329
- 4- 8.334

Combined routes (mg/kg bw/day) :

- 1- 7.833
- 2- 6.674
- 3- 0.271878
- 4- 1.016

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 227 - General consumer use of lubricants and greases in vehicles or machinery (Indoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** General consumer use of lubricants and greases in vehicles or machinery - Indoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09a
Market sector by type of chemical product: PC24
Environmental contributing scenarios : **ERC09a: Wide dispersive indoor use of substances in closed systems - ERC09a**
Health Contributing scenarios : **PC24: Lubricants, greases, release products - PC24**

Number of the ES	: 110
Processes and activities covered by the exposure scenario	: Includes filling and draining of containers and enclosed machinery (including engines)
Additional information	: Site 1 + 2 ATIEL-Group_BC1.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC09a: Wide dispersive indoor use of substances in closed systems

Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 5% Release fraction to air from process. 0% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC24: Lubricants, greases, release products

Physical state	: Liquid
Amounts used	: Amounts used: 5 000 g per application
	Product Ingredient Fraction by Weight: 1% Dermal; 1% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per day
	Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09a: Wide dispersive indoor use of substances in closed systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.004363
	Freshwater sediments (mg/kg d.w.) : 0.015959
	Marine water (mg/l) : 0.000552
	Marine water sediments (mg/kg d.w.) : 0.002019
	Agricultural soil (mg/kg dwt): 0.008583
	Grassland (mg/kg dwt): 0.008572
	Sewage Treatment Plant (mg/l) : 0

Exposure estimation and reference to its source - Consumers: PC24: Lubricants, greases, release products

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 1.429
	Inhalation exposure (mg/m ³) : 25
	Combined routes (mg/kg bw/day): 3.714

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 228 - General consumer use of lubricants and greases in vehicles or machinery (Outdoor) - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** General consumer use of lubricants and greases in vehicles or machinery - Outdoor - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC09b
Market sector by type of chemical product: PC24
Environmental contributing scenarios : **ERC09b: Wide dispersive outdoor use of substances in closed systems - ERC09b**
Health Contributing scenarios : **PC24: Lubricants, greases, release products - PC24**

Number of the ES	: 111
Processes and activities covered by the exposure scenario	: Includes filling and draining of containers and enclosed machinery (including engines)
Additional information	: Site 1 + 2 ATIEL-Group_BC1.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC09b: Wide dispersive outdoor use of substances in closed systems**

Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 5% Release fraction to air from process. 5% Release fraction to surface water from process. 5% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC24: Lubricants, greases, release products

Physical state	: Liquid
Amounts used	: Amounts used: 5 000 g per application Product Ingredient Fraction by Weight: 1% Dermal; 1% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per day Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC09b: Wide dispersive outdoor use of substances in closed systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004387 Freshwater sediments (mg/kg d.w.) : 0.016048 Marine water (mg/l) : 0.000554 Marine water sediments (mg/kg d.w.) : 0.002028 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.000244

Exposure estimation and reference to its source - Consumers: PC24: Lubricants, greases, release products

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 1.429 Inhalation exposure (mg/m ³) : 25 Combined routes (mg/kg bw/day): 3.714

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 229 - General exposures to consumers arising from the use household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** General exposures to consumers arising from the use household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Sector of end use: SU21

Subsequent service life relevant for that use: Yes.

Environmental Release Category: ERC08a

Market sector by type of chemical product: PC03, PC09a, PC24, PC35

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PC03: Air care products - PC03**

PC09a: Coatings and paints, thinners, paint removers - PC09a

PC24: Lubricants, greases, release products - PC24

PC35: Washing and cleaning products (including solvent based products) - PC35

Number of the ES : 112

Industry Association : Concawe

Additional information : Site 1 + 2

CONCAWE4C.5, CONCAWE4C.3, CONCAWE4C.1, CONCAWE4C.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 8.4c.v1

Amounts used : 1000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 95% Release fraction to air from process.
2.5% Release fraction to surface water from process.
2.5% Release fraction to soil from process.
0.05% Fraction used at main source.
10% Fraction tonnage to region

Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC03: Air care products

Further specification	: Product (Sub-)Categories: Air care, instant action (aerosol sprays)
Amounts used	: Amounts used: 10 g per application
	Product Ingredient Fraction by Weight: 10% Dermal; 10% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year
	Exposure Duration: 0.250 hour(s)
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling consumer exposure for: PC09a: Coatings and paints, thinners, paint removers

Further specification	: Product (Sub-)Categories 9a: Aerosol spray can
Amounts used	: Amounts used: 300 g per application
	Product Ingredient Fraction by Weight: 10% Dermal; 10% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year
	Exposure Duration: 0.330 hour(s)
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling consumer exposure for: PC24: Lubricants, greases, release products

Further specification	: Product (Sub-)Categories: Spray
Amounts used	: Amounts used: 300 g per application
	Product Ingredient Fraction by Weight: 10% Dermal; 10% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year
	Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: inside hands / one hand / Palm of both hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling consumer exposure for: PC35: Washing and cleaning products (including solvent based products)

Further specification	: Product (Sub-)Categories: Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)
Amounts used	: Amounts used: 300 g per application
	Product Ingredient Fraction by Weight: 10% Dermal; 10% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year
	Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :

- Freshwater (mg/l) 0.004366
- Freshwater sediments (mg/kg d.w.) : 0.01597
- Marine water (mg/l) : 0.000552
- Marine water sediments (mg/kg d.w.) : 0.00202
- Agricultural soil (mg/kg dwt): 0.008571
- Grassland (mg/kg dwt): 0.008571
- Sewage Treatment Plant (mg/l) : 0.00003

Exposure estimation and reference to its source - Consumers: PC03: Air care products

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): Not applicable.
- Inhalation exposure (mg/m³) : 0.136986
- Oral exposure (mg/kg bw/day): Not applicable.
- Combined routes (mg/kg bw/day): 0.000782

Exposure estimation and reference to its source - Consumers: PC09a: Coatings and paints, thinners, paint removers

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): Not applicable.
- Inhalation exposure (mg/m³) : 4.11
- Oral exposure (mg/kg bw/day): Not applicable.
- Combined routes (mg/kg bw/day): 0.030985

Exposure estimation and reference to its source - Consumers: PC24: Lubricants, greases, release products

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.

Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:

- Dermal exposure (mg/kg bw/day): 0.01958
- Inhalation exposure (mg/m³) : 4.11
- Oral exposure (mg/kg bw/day): Not applicable.
- Combined routes (mg/kg bw/day): 0.395151

SILIPON RN6068

ES 229 - General exposures to consumers arising from the use household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Consumers: PC35: Washing and cleaning products (including solvent based products)

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.039155
Inhalation exposure (mg/m³) : 0.479452
Oral exposure (mg/kg bw/day): Not applicable.
Combined routes (mg/kg bw/day): 0.082972

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 230 - Manufacturing / Formulation of Fertilizers - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Manufacturing / Formulation of Fertilisers. - Consumer - Sulfuric acid, mono-C12-18-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC02
Market sector by type of chemical product: PC12, PC19
Environmental contributing scenarios : **ERC02: Formulation of preparations*** - ERC02
Health Contributing scenarios : **PC12: Fertilizers** - PC12

Number of the ES : 138c
Processes and activities covered by the exposure scenario : Covers also PC19: Intermediate
Additional information : Site 1 + 2
Fe2.1.3, Fe2.1.1, Fe3.1.1, Fe2.5.1, Fe2.5.2, Fe2.1.2, Fe2.6, Fe3.4, Fe2.2, Fe3.3, Fe2.3, Fe2.4

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC02: Formulation of preparations***
Amounts used : 500 Tonnes/year
Frequency and duration of use : Release times per year: 100
Environment factors not influenced by risk management : River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 2.5%
Release fraction to water from process: 2%
Release fraction to soil from process: 0.01%
Fraction used at main source: 100%
Fraction tonnage to region: 100%
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day):: 2000000

Contributing scenario controlling consumer exposure for: PC12: Fertilizers

Further specification	: Soluble liquid or solid fertilizer or suspension fertilizer: Dilution or suspension
Product characteristics	: Product (Sub-)Categories: Lawn and garden preparations
Amounts used	: Product Ingredient Fraction by Weight: Dermal: 50% ; Oral: 50%
Frequency and duration of use	: 1 time(s) per day
Human factors not influenced by risk management	: skin surface area dermal: Hands
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC02: Formulation of preparations*

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.093327 Freshwater sediments (mg/kg d.w.) : 0.341366 Marine water (mg/l) : 0.009448 Marine water sediments (mg/kg d.w.) : 0.03456 Agricultural soil (mg/kg dwt): 0.009985 Grassland (mg/kg dwt): 0.00902 Sewage Treatment Plant (mg/l) : 0.889639

Exposure estimation and reference to its source - Consumers: PC12: Fertilizers

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 71.458 Inhalation exposure (mg/m ³) : 15 Combined routes (mg/kg bw/day): 86.458

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 231 - Other Consumer Uses: Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Other consumer uses: Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios :

Number of the ES : 142
Additional information : Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 8.16.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure : 95% Release fraction to air from process.
2.5% Release fraction to surface water from process.
2.5% Release fraction to soil from process.
0.05% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for:
Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004366
 Freshwater sediments (mg/kg d.w.) : 0.01597
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.00202
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 0.00003

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human): : Not available.

Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 232 - Service Life of Construction Chemicals (Indoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Service Life of Construction Chemicals (Indoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC11a
Article category related to subsequent service life: AC13
Environmental contributing scenarios : **ERC11a: Wide dispersive indoor use of long-life articles and materials with low release - ERC11a**
Health Contributing scenarios : **Plastic articles**

Number of the ES : 171
Additional information : Site 1 + 2
EFCC (Bauchemie)-C1.5.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC11a: Wide dispersive indoor use of long-life articles and materials with low release

Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 0.05%
Release fraction to water from process: 0.05%
Release fraction to soil from process: 0%
Fraction used at main source: 0.2%
Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: Plastic articles

Product characteristics : Article Subcategory: Plastic, larger articles (plastic chair, PVC flooring, lawn mower, PC)
Amounts used : Amounts used: 8000 g per application
Product Ingredient Fraction by Weight: Dermal: 2.5%; Inhalation: 2.5%
Frequency and duration of use : Frequency: 1 time(s) per day
Exposure Duration: 8 hour(s)

Date of issue/Date of revision : ^ (ES Revision date)

909/934

SILIPON RN6068	ES 232 - Service Life of Construction Chemicals (Indoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Human factors not influenced by risk management	: skin surface area dermal: upper part of the body
Other given operational conditions affecting consumers exposure	: Ventilation Rate: 40%
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools/
Exposure estimation and reference to its source - Environment: ERC11a: Wide dispersive indoor use of long-life articles and materials with low release	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004363 Freshwater sediments (mg/kg d.w.) : 0.01596 Marine water (mg/l) : 0.000552 Marine water sediments (mg/kg d.w.) : 0.002019 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 2.44x10 ⁻⁶
Exposure estimation and reference to its source - Consumers: Plastic articles	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Effects: Long term Systemic Dermal exposure (mg/kg bw/day): 3.646 Inhalation exposure (mg/m ³): 60 Combined routes (mg/kg bw/day): 14.613

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 233 - Service Life of Construction Chemicals (Outdoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Service Life of Construction Chemicals (Outdoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC10a
Article category related to subsequent service life: AC13
Environmental contributing scenarios : **ERC10a: Wide dispersive outdoor use of long-life articles and materials with low release - ERC10a**
Health Contributing scenarios : **Plastic articles**

Number of the ES : 172
Additional information : Site 1 + 2
EFCC (Bauchemie)-C1.6.2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC10a: Wide dispersive outdoor use of long-life articles and materials with low release

Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 0.05%
Release fraction to water from process: 3.2%
Release fraction to soil from process: 3.2%
Fraction used at main source: 0.2%
Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: Plastic articles

Product characteristics : Article Subcategory: Plastic, larger articles (plastic chair, PVC flooring, lawn mower, PC)
Amounts used : Amounts used: 8000 g per application
Product Ingredient Fraction by Weight: Dermal: 2.5%; Inhalation: 2.5%
Frequency and duration of use : Frequency: 1 time(s) per day
Exposure Duration: 8 hour(s)

Date of issue/Date of revision : ^(ES Revision date)

911/934

SILIPON RN6068	ES 233 - Service Life of Construction Chemicals (Outdoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Human factors not influenced by risk management	: skin surface area dermal: upper part of the body
Other given operational conditions affecting consumers exposure	: Ventilation Rate: 40%
Area of use:	: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools/
Exposure estimation and reference to its source - Environment: ERC10a: Wide dispersive outdoor use of long-life articles and materials with low release	
Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> : Freshwater (mg/l) 0.004379 Freshwater sediments (mg/kg d.w.) : 0.016016 Marine water (mg/l) : 0.000554 Marine water sediments (mg/kg d.w.) : 0.002025 Agricultural soil (mg/kg dwt): 0.008571 Grassland (mg/kg dwt): 0.008571 Sewage Treatment Plant (mg/l) : 0.000156
Exposure estimation and reference to its source - Consumers: Plastic articles	
Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> : Dermal exposure (mg/kg bw/day): 3.646 Inhalation exposure (mg/m ³): 60 Combined routes (mg/kg bw/day): 14.613

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 234 - Use as an agrochemical excipient for application by manual spraying and aerosols - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Use as an agrochemical excipient for application by manual spraying and aerosols - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC12
Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**
Health Contributing scenarios : **PC12: Fertilizers - PC12**

Number of the ES : 188
Industry Association : Concawe
Additional information : Site 1 + 2
CONCAWE11B.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08a: Wide dispersive indoor use of processing aids in open systems
Further specification : Specific Environmental Release Category: ESVOC SPERC Code 8.11b.v1
Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure : 90% Release fraction to air from process.
1% Release fraction to surface water from process.
9% Release fraction to soil from process.
0.2% Fraction used at main source.
10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

SILIPON RN6068

ES 234 - Use as an agrochemical excipient for application by manual spraying and aerosols - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Contributing scenario controlling consumer exposure for: PC12: Fertilizers

Further specification : Product (Sub-)Categories: Lawn and garden preparations

Amounts used : Product Ingredient Fraction by Weight
- Dermal: 10%
- Oral: 10%.

Frequency and duration of use : Frequency: 1 time(s) per year

Conditions and measures related to personal protection and hygiene

Section 3 - Exposure estimation and reference to its source

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004368
Freshwater sediments (mg/kg d.w.) : 0.015976
Marine water (mg/l) : 0.000553
Marine water sediments (mg/kg d.w.) : 0.002021
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Consumers: PC12: Fertilizers

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.039155
Oral exposure (mg/kg bw/day): 0.08219
Combined routes (mg/kg bw/day): 0.47374

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 235 - Use in coatings (paints, inks, adhesives, etc) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Use in coatings (paints, inks, adhesives, etc) - Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08a
Market sector by type of chemical product: PC01, PC09a, PC09b, PC09c, PC24, PC31

Environmental contributing scenarios : **ERC08a: Wide dispersive indoor use of processing aids in open systems - ERC08a**

Health Contributing scenarios : **PC01: Adhesives, sealants - PC01**
PC09a: Coatings and paints, thinners, paint removers - PC09a
PC09b: Fillers, putties, plasters, modelling clay - PC09b
PC09c: Finger paints - PC09c
PC24: Lubricants, greases, release products - PC24
PC31: Polishes and wax blends - PC31

Number of the ES	: 195
Industry Association	: Concauwe
Processes and activities covered by the exposure scenario	: Includes exposures during use (including product transfer and spraying, brushing, aerosol and other manual application tasks); and equipment cleaning.
Additional information	: Site 1 + 2 CONCAWE-3C.4, CONCAWE-3C.11, CONCAWE-3C.12, CONCAWE-3C.1, CONCAWE-3C.6, CONCAWE-3C.5

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: **ERC08a: Wide dispersive indoor use of processing aids in open systems**

Further specification : Specific Environmental Release Category: ESVOC SPERC Code 8.3cv1

Amounts used : 1 000 Tonnes/year

Frequency and duration of use : Release times per year: 365

Environment factors not influenced by risk management : River flow rate: 18000 m3/d

Other given operational conditions affecting environmental exposure : 98.5% Release fraction to air from process.
1% Release fraction to surface water from process.
0.5% Release fraction to soil from process.
0.05% Fraction used at main source.
10% Fraction tonnage to region

Date of issue/Date of revision : ^ (ES Revision date)

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Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification : Product (Sub-)Categories 1: Glue from spray

Amounts used : Amounts used: 255 g per application

Product Ingredient Fraction by Weight: 10% Dermal; 10% Inhalation

Frequency and duration of use : Frequency: 1 time(s) per year

Exposure Duration: 4 hour(s)

Human factors not influenced by risk management : skin surface area dermal: fingertips

Area of use: : Room volume: 20 m³

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling consumer exposure for: PC09a: Coatings and paints, thinners, paint removers

Further specification : Product (Sub-)Categories 9a: Aerosol spray can

Amounts used : Amounts used: 300 g per application

Product Ingredient Fraction by Weight: 10 % Inhalation

Frequency and duration of use : Frequency: 1 time(s) per year

Exposure Duration: 0.330 hour(s)

Area of use: : Room volume: 20 m³

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling consumer exposure for: PC09b: Fillers, putties, plasters, modelling clay

Further specification : Product (Sub-)Categories 9b: Plasters and floor equalisers

Amounts used : Amounts used: 2.50x10+4 g per application.

Product Ingredient Fraction by Weight: 10% Dermal; 10% Inhalation

Frequency and duration of use : Exposure Duration: 2 hour(s)

Frequency: 1 time(s) per year

Human factors not influenced by risk management : skin surface area dermal: Hands

Area of use: : Room volume: 20 m³

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling consumer exposure for: PC09c: Finger paints

Further specification : Product (Sub-)Categories 9c: Finger paints

Amounts used : Product Ingredient Fraction by Weight: 10% Dermal; 10% Oral

Frequency and duration of use : Frequency: 1 time(s) per year

Human factors not influenced by risk management : skin surface area dermal: hands

Area of use: : Room volume: 20 m³

Conditions and measures related to personal protection and hygiene

Contributing scenario controlling consumer exposure for: PC24: Lubricants, greases, release products

Further specification	: Product (Sub-)Categories 24: Spray
Amounts used	: Amounts used: 300 g per application
	Product Ingredient Fraction by Weight: 10% Dermal; 10% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year
	Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: Palm of both hands / inside hands / one hand
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC31: Polishes and wax blends**

Further specification	: Product (Sub-)Categories 31: Polishes, spray (furniture, shoes)
Amounts used	: Amounts used: 135 g per application.
	Product Ingredient Fraction by Weight: 10% Dermal; 10% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year
	Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08a: Wide dispersive indoor use of processing aids in open systems

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.004364
	Freshwater sediments (mg/kg d.w.) : 0.015963
	Marine water (mg/l) : 0.000552
	Marine water sediments (mg/kg d.w.) : 0.00202
	Agricultural soil (mg/kg dwt): 0.008571
	Grassland (mg/kg dwt): 0.008571
	Sewage Treatment Plant (mg/l) : 0.000012

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0.
	Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 0.00163
	Inhalation exposure (mg/m ³) : 3.493
	Combined routes (mg/kg bw/day): 0.320865

Exposure estimation and reference to its source - Consumers: PC09a: Coatings and paints, thinners, paint removers

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Inhalation exposure (mg/m³) : 4.11
Combined routes (mg/kg bw/day): 0.030985

Exposure estimation and reference to its source - Consumers: PC09b: Fillers, putties, plasters, modelling clay

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.039155
Inhalation exposure (mg/m³) : 3.425
Combined routes (mg/kg bw/day): 0.195643

Exposure estimation and reference to its source - Consumers: PC09c: Finger paints

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.069699
Oral exposure (mg/kg bw/day) : 0.036986
Combined routes (mg/kg bw/day): 0.106685

Exposure estimation and reference to its source - Consumers: PC24: Lubricants, greases, release products

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.01958
Inhalation exposure (mg/m³) : 4.11
Combined routes (mg/kg bw/day): 0.395151

Exposure estimation and reference to its source - Consumers: PC31: Polishes and wax blends

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.039155
Inhalation exposure (mg/m³) : 1.849
Combined routes (mg/kg bw/day): 0.208162

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.
Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 236 - Wide dispersive use of non-volatile substances in Construction Chemicals, indoor - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive use of non-volatile substances in Construction Chemicals, Indoor Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c
Market sector by type of chemical product: PC01, PC09a, PC09b

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix - ERC08c**

Health Contributing scenarios : **PC01: Adhesives, sealants - PC01**
PC09a: Coatings and paints, thinners, paint removers - PC09a
PC09b: Fillers, putties, plasters, modelling clay - PC09b

Number of the ES	: 205b
Industry Association	: EFCC
Additional information	: Site 1 + 2 EFCC (Bauchemie)-P1.8, EFCC (Bauchemie)-P1.4, EFCC (Bauchemie)-P1.2, EFCC (Bauchemie)-P1.12, EFCC (Bauchemie)-C1.2.1, EFCC (Bauchemie)-C1.2.2, EFCC (Bauchemie)-C1.2.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: EFCC SPERC Code 8C.1a.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 1% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification	: Product (Sub-)Categories: Glue from spray
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 50%.
Amounts used	: Amounts used: 255 g per application. Product Ingredient Fraction by Weight: 20% Dermal; 20% Inhalation
Frequency and duration of use	: Frequency: 12 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: fingertips
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC09a: Coatings and paints, thinners, paint removers**

Further specification	: Product (Sub-)Categories: Aerosol spray can
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 50%.
Amounts used	: Amounts used: 300 g per application. Product Ingredient Fraction by Weight: 20% Inhalation
Frequency and duration of use	: Frequency: 2 time(s) per year Exposure Duration: 0.330 hour(s)
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC09b: Fillers, putties, plasters, modelling clay**

Further specification	: Product (Sub-)Categories: Plasters and floor equalisers
Concentration of substance in mixture or article	: Substance is in preparations. (Inhalation): 50%.
Amounts used	: Amounts used: 2.50x10 ⁺⁴ g per application. Product Ingredient Fraction by Weight: 20% Dermal; 20% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 2 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
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Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.004368
	Freshwater sediments (mg/kg d.w.) : 0.015976
	Marine water (mg/l) : 0.000553
	Marine water sediments (mg/kg d.w.) : 0.002021
	Agricultural soil (mg/kg dwt): 0.008571
	Grassland (mg/kg dwt): 0.008571
	Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 0.039123
	Inhalation exposure (mg/m ³) : 83.836
	Combined routes (mg/kg bw/day): 7.701

Exposure estimation and reference to its source - Consumers: PC09a: Coatings and paints, thinners, paint removers

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): -
	Inhalation exposure (mg/m ³) : 16.438
	Combined routes (mg/kg bw/day): 0.123938

Exposure estimation and reference to its source - Consumers: PC09b: Fillers, putties, plasters, modelling clay

Exposure assessment (human):	: Calculation tool used: EasyTRA 2.0. Effects: Long term Systemic
Exposure estimation	: <u>Estimated Exposure Concentrations</u> :
	Dermal exposure (mg/kg bw/day): 0.078311
	Inhalation exposure (mg/m ³) : 6.849
	Combined routes (mg/kg bw/day): 0.391286

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 237 - Wide dispersive use of non-volatile substances in Construction Chemicals, outdoor - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

List of use descriptors : **Identified use name:** Wide dispersive use of non-volatile substances in Construction Chemicals, Outdoor Consumer use - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC08c
Market sector by type of chemical product: PC01, PC09a, PC09b

Environmental contributing scenarios : **ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix - ERC08c**

Health Contributing scenarios : **PC01: Adhesives, sealants - PC01**
PC09a: Coatings and paints, thinners, paint removers - PC09a
PC09b: Fillers, putties, plasters, modelling clay - PC09b

Number of the ES	: 206b
Industry Association	: EFCC
Additional information	: Site 1 + 2 EFCC (Bauchemie)-P1.8, EFCC (Bauchemie)-P1.4, EFCC (Bauchemie)-P1.2, EFCC (Bauchemie)-P1.12, EFCC (Bauchemie)-C1.2.1, EFCC (Bauchemie)-C1.2.2, EFCC (Bauchemie)-C1.2.3

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix	
Further specification	: Specific Environmental Release Category: EFCC SPERC Code 8C.1a.v1
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d
Other given operational conditions affecting environmental exposure	: 0% Release fraction to air from process. 1% Release fraction to surface water from process. 0% Release fraction to soil from process. 0.2% Fraction used at main source. 10% Fraction tonnage to region
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: PC01: Adhesives, sealants

Further specification	: Product (Sub-)Categories: Glue from spray
Amounts used	: Amounts used: 255 g per application. Product Ingredient Fraction by Weight: 20% Dermal; 20% Inhalation
Frequency and duration of use	: Frequency: 12 time(s) per year Exposure Duration: 4 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: fingertips
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC09a: Coatings and paints, thinners, paint removers**

Further specification	: Product (Sub-)Categories: Aerosol spray can
Amounts used	: Amounts used: 300 g per application. Product Ingredient Fraction by Weight: 20% Inhalation
Frequency and duration of use	: Frequency: 2 time(s) per year Exposure Duration: 0.330 hour(s)
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Contributing scenario controlling consumer exposure for: PC09b: Fillers, putties, plasters, modelling clay**

Further specification	: Product (Sub-)Categories: Plasters and floor equalisers
Amounts used	: Amounts used: 2.50x10 ⁴ g per application. Product Ingredient Fraction by Weight: 20% Dermal; 20% Inhalation
Frequency and duration of use	: Frequency: 1 time(s) per year Exposure Duration: 2 hour(s)
Human factors not influenced by risk management	: skin surface area dermal: hands
Area of use:	: Room volume: 20 m ³

Conditions and measures related to personal protection and hygiene**Section 3 - Exposure estimation and reference to its source**

Website: : <http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/>

Exposure estimation and reference to its source - Environment: ERC08c: Wide dispersive indoor use resulting in inclusion into or onto a matrix

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.004368
	Freshwater sediments (mg/kg d.w.) : 0.015976
	Marine water (mg/l) : 0.000553
	Marine water sediments (mg/kg d.w.) : 0.002021
	Agricultural soil (mg/kg dwt): 0.008571
	Grassland (mg/kg dwt): 0.008571
	Sewage Treatment Plant (mg/l) : 0.000049

Exposure estimation and reference to its source - Consumers: PC01: Adhesives, sealants

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.039123
Inhalation exposure (mg/m³) : 83.836
Combined routes (mg/kg bw/day): 7.701

Exposure estimation and reference to its source - Consumers: PC09a: Coatings and paints, thinners, paint removers

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): -
Inhalation exposure (mg/m³) : 16.438
Combined routes (mg/kg bw/day): 0.123938

Exposure estimation and reference to its source - Consumers: PC09b: Fillers, putties, plasters, modelling clay

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
Effects: Long term Systemic

Exposure estimation : Estimated Exposure Concentrations:
Dermal exposure (mg/kg bw/day): 0.078311
Inhalation exposure (mg/m³) : 6.849
Combined routes (mg/kg bw/day): 0.391286

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 238 - Exposure from textile articles (High Release, Indoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Exposure from textile articles (High Release, Indoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC11b
Environmental contributing scenarios : **ERC11b: Wide dispersive indoor use of long-life articles and materials with high or intended release (including abrasive processing)** - ERC11b
Health Contributing scenarios :

Number of the ES : 210
Additional information : Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC11b: Wide dispersive indoor use of long-life articles and materials with high or intended release (including abrasive processing)

Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 100%
Release fraction to water from process: 100%
Release fraction to soil from process: 0%
Fraction used at main source: 0.2%
Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

**Contributing scenario controlling consumer exposure for:
Conditions and measures related to personal protection and hygiene**

Section 3 - Exposure estimation and reference to its source

Date of issue/Date of revision : ^ (ES Revision date)

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SILIPON RN6068

ES 238 - Exposure from textile articles (High Release, Indoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Environment: ERC11b: Wide dispersive indoor use of long-life articles and materials with high or intended release (including abrasive processing)

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.00485
Freshwater sediments (mg/kg d.w.) : 0.017742
Marine water (mg/l) : 0.000601
Marine water sediments (mg/kg d.w.) : 0.002198
Agricultural soil (mg/kg dwt): 0.008578
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human): : Not available.

Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 239 - Exposure from textile articles (High Release, Outdoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Exposure from textile articles (High Release, Outdoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC10b
Environmental contributing scenarios : **ERC10b: Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing)** - ERC10b
Health Contributing scenarios :

Number of the ES : 211
Additional information : Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC10b: Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing)

Amounts used : 1000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 100%
Release fraction to water from process: 100%
Release fraction to soil from process: 100%
Fraction used at main source: 0.2%
Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

**Contributing scenario controlling consumer exposure for:
Conditions and measures related to personal protection and hygiene**

Section 3 - Exposure estimation and reference to its source

Date of issue/Date of revision : ^(ES Revision date)

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Exposure estimation and reference to its source - Environment: ERC10b: Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing)

Exposure assessment (environment):	: Calculation tool used: EasyTRA 2.0.
Exposure estimation	: <u>Predicted Environmental Concentration</u> :
	Freshwater (mg/l) 0.00485
	Freshwater sediments (mg/kg d.w.) : 0.017742
	Marine water (mg/l) : 0.000601
	Marine water sediments (mg/kg d.w.) : 0.002198
	Agricultural soil (mg/kg dwt): 0.008578
	Grassland (mg/kg dwt): 0.008571
	Sewage Treatment Plant (mg/l) : 0.004875

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human):	: Not available.
Exposure estimation	: Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Not available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 240 - Exposure from textile articles (Low Release, Indoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Exposure from textile articles (Low Release, Indoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC11a
Article category related to subsequent service life: AC05
Environmental contributing scenarios : **ERC11a: Wide dispersive indoor use of long-life articles and materials with low release - ERC11a**
Health Contributing scenarios : **AC05 Fabrics, textiles and apparel**

Number of the ES	: 212
Additional information	: Site 1 + 2 TEGEWA-F5.4, TEGEWAT14.2, TEGEWA-F5.2, TEGEWA-T14.4, TEGEWA-T14.3, TEGEWA-F5.1, TEGEWA-F5.3, TEGEWAT14.1

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC11a: Wide dispersive indoor use of long-life articles and materials with low release	
Amounts used	: 1000 Tonnes/year
Frequency and duration of use	: Release times per year: 365
Environment factors not influenced by risk management	: River flow rate: 18000 m3/d.
Other given operational conditions affecting environmental exposure	: Release fraction to air from process.: 0.05% Release fraction to water from process: 0.05% Release fraction to soil from process: 0% Fraction used at main source: 0.2% Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant	: Municipal Sewage Treatment Plant (STP) discharge (L/day): 2000000

Contributing scenario controlling consumer exposure for: AC05 Fabrics, textiles and apparel

Further specification	: Sub-scenario(s): 1- ndoor use of long life textiles with low release - Car seat, chair, flooring 2- wide dispersive indoor use of long-life articles and materials with low release - Car seat, chair, flooring 3- ndoor use of long life textiles with low release - Bedding, mattress 4- wide dispersive indoor use of long-life articles and materials with low release - Bedding, mattress 5- wide dispersive indoor use of long-life articles and materials with low release - Toys (cuddly toy) 6- ndoor use of long life textiles with low release - Clothing (all kind of materials), towel 7- wide dispersive indoor use of long-life articles and materials with low release - Clothing (all kind of materials), towel 8- ndoor use of long life textiles with low release - Toys (cuddly toy)
Product characteristics	: - Product (Sub-)Categories: - Sub-scenario(s) 1; 2: Car seat, chair, flooring - Sub-scenario(s) 3; 4: Bedding, mattress - Sub-scenario(s) 5; 8: Toys (cuddly toy) - Sub-scenario(s) 6; 7: Clothing (all kind of materials), towel
Amounts used	: Amounts used (per application): - Sub-scenario(s) 1; 2: 1.60x10 ⁺⁴ g Product Ingredient Fraction by Weight: Dermal: 1%; Inhalation: 1% - Sub-scenario(s) 3; 4: 2.50x10 ⁺⁴ g Product Ingredient Fraction by Weight: Dermal: 1%; Inhalation: 1%; Oral: 1% - Sub-scenario(s) 5; 8: --- g Product Ingredient Fraction by Weight: Dermal: 1%; Oral: 1% - Sub-scenario(s) 6; 7: 500 g Product Ingredient Fraction by Weight: Dermal: 1%; Inhalation: 1%; Oral: 1%
Frequency and duration of use	: 1 time(s) per day - Sub-scenario(s) 1; 2; 3; 4; 6; 7: Exposure Duration: 8 hour(s)
Human factors not influenced by risk management	: - Sub-scenario(s) 1; 2: skin surface area dermal: upper part of the body - Sub-scenario(s) 3; 4; 6; 7: skin surface area dermal: whole body except feet, hands and head skin surface area oral: area product mouthed - Sub-scenario(s) 5; 8: skin surface area dermal: Hands and forearms skin surface area oral: area product mouthed
Other given operational conditions affecting consumers exposure	: Sub-scenario(s) 1; 2; 3; 4: Ventilation Rate: 40%
Area of use:	: Sub-scenario(s) 1; 2; 3; 4; 6; 7: Room volume: 20 m ³
Conditions and measures related to personal protection and hygiene	

Section 3 - Exposure estimation and reference to its source

Website:	: http://www.cefic.org/Industry-support/Implementing-reach/Guidances-and-Tools1/
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Exposure estimation and reference to its source - Environment: ERC11a: Wide dispersive indoor use of long-life articles and materials with low release

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
 Freshwater (mg/l) 0.004363
 Freshwater sediments (mg/kg d.w.) : 0.01596
 Marine water (mg/l) : 0.000552
 Marine water sediments (mg/kg d.w.) : 0.002019
 Agricultural soil (mg/kg dwt): 0.008571
 Grassland (mg/kg dwt): 0.008571
 Sewage Treatment Plant (mg/l) : 2.44x10-6

Exposure estimation and reference to its source - Consumers: AC05 Fabrics, textiles and apparel

Exposure assessment (human): : Calculation tool used: EasyTRA 2.0.
 Effects: Long term Systemic

Sub-scenario(s):
 1- ndoor use of long life textiles with low release - Car seat, chair, flooring
 2- wide dispersive indoor use of long-life articles and materials with low release - Car seat, chair, flooring
 3- ndoor use of long life textiles with low release - Bedding, mattress
 4- wide dispersive indoor use of long-life articles and materials with low release - Bedding, mattress
 5- wide dispersive indoor use of long-life articles and materials with low release - Toys (cuddly toy)
 6- ndoor use of long life textiles with low release - Clothing (all kind of materials), towel
 7- wide dispersive indoor use of long-life articles and materials with low release - Clothing (all kind of materials), towel
 8- ndoor use of long life textiles with low release - Toys (cuddly toy)

Exposure estimation : Dermal exposure
 Exposure concentration (mg/kg bw/day):
 - Sub-scenario(s) 1; 2: 14.583
 - Sub-scenario(s) 3; 4: 2.386
 - Sub-scenario(s) 5; 8: 5.568
 - Sub-scenario(s) 6; 7: 23.858

Inhalation exposure
 Exposure concentration (mg/m³):
 - Sub-scenario(s) 1; 2: 48
 - Sub-scenario(s) 3; 4: 75
 - Sub-scenario(s) 6; 7: 2.5

Oral exposure
 Exposure concentration (mg/kg bw/day)
 - Sub-scenario(s) 3; 4: 0.010
 - Sub-scenario(s) 5; 6; 7; 8: 0.100

Combined routes
 Exposure concentration (mg/kg bw/day):
 - Sub-scenario(s) 1; 2: 23.357
 - Sub-scenario(s) 3; 4: 16.104
 - Sub-scenario(s) 5; 8: 5.668
 - Sub-scenario(s) 6; 7: 24.415

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.
Health : Not available.

SILIPON RN6068

ES 240 - Exposure from textile articles (Low Release, Indoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : 00032069
Product name : SILIPON RN6068

Section 1 - Title

Short title of the exposure scenario : ES 241 - Exposure from textile articles (Low Release, Outdoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
List of use descriptors : **Identified use name:** Exposure from textile articles (Low Release, Outdoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts
Substance supplied to that use in form of: As such, In a mixture
Sector of end use: SU21
Subsequent service life relevant for that use: Yes.
Environmental Release Category: ERC10a
Environmental contributing scenarios : **ERC10a: Wide dispersive outdoor use of long-life articles and materials with low release - ERC10a**
Health Contributing scenarios :

Number of the ES : 213
Additional information : Site 1 + 2

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for: ERC10a: Wide dispersive outdoor use of long-life articles and materials with low release

Amounts used : 1,000 Tonnes/year
Frequency and duration of use : Release times per year: 365
Environment factors not influenced by risk management : River flow rate 18000 m3/d.
Other given operational conditions affecting environmental exposure : Release fraction to air from process.: 0.05%
Release fraction to water from process: 3.2%
Release fraction to soil from process: 3.2%
Fraction used at main source: 0.2%
Fraction tonnage to region: 10%
Conditions and measures related to municipal sewage treatment plant : Municipal Sewage Treatment Plant (STP) discharge (L/day):: 2000000

**Contributing scenario controlling consumer exposure for:
Conditions and measures related to personal protection and hygiene**

Section 3 - Exposure estimation and reference to its source

Date of issue/Date of revision : ^(ES Revision date)

933/934

SILIPON RN6068

ES 241 - Exposure from textile articles (Low Release, Outdoor) - Consumer - Sulfuric acid, mono-C12-14-alkyl esters, sodium salts

Exposure estimation and reference to its source - Environment: ERC10a: Wide dispersive outdoor use of long-life articles and materials with low release

Exposure assessment (environment): : Calculation tool used: EasyTRA 2.0.

Exposure estimation : Predicted Environmental Concentration :
Freshwater (mg/l) 0.004379
Freshwater sediments (mg/kg d.w.) : 0.016016
Marine water (mg/l) : 0.000554
Marine water sediments (mg/kg d.w.) : 0.002025
Agricultural soil (mg/kg dwt): 0.008571
Grassland (mg/kg dwt): 0.008571
Sewage Treatment Plant (mg/l) : 0.000156

Exposure estimation and reference to its source - Consumers:

Exposure assessment (human): : Not available.

Exposure estimation : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Not available.

Health : Not available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.