



SAFETY DATA SHEET

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS
Product number	51922
Synonyms; trade names	EMAL 10P HD, EMAL 10N, EMAL 10G 3, EMAL 10 G, EMAL 10G RSPO MB, EMAL 10P HD RSPO MB, EMAL 10N RSPO MB, EMAL 10G 3 RSPO MB
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Detergent production Cleaning agent. Binder Release Agent Formulation Leather and paper industry Textiles Production of Lubricants Impregnation Agents Bleaching Agent Chemicals used in the synthesis and / or formulation of industrial products Personal Care Cosmetics Fragrance Fertilizer For further information, see attached Exposure Scenario.
-----------------	--

1.3. Details of the supplier of the safety data sheet

Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com
----------	---

1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	51922

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318
Environmental hazards	Aquatic Chronic 3 - H412

2.2. Label elements

EC number	287-809-4
-----------	-----------

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS**Hazard pictograms****Signal word**

Danger

Hazard statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P273 Avoid release to the environment.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352 IF ON SKIN: Wash with plenty of water.
P310 Immediately call a POISON CENTER/ doctor.
P501 Dispose of contents/ container in accordance with local regulations.

Contains

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria. The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients**3.1. Substances****SULFURIC ACID, MONO-C12-14-ALKYL ESTERS,
SODIUM SALTS****100%**

CAS number: 85586-07-8

EC number: 287-809-4

REACH registration number: 01-
2119489463-28-XXXX

Acute Toxicity Estimate (oral):2000 mg/kg

Classification

Acute Tox. 4 - H302

Skin Irrit. 2 - H315

Eye Dam. 1 - H318

Aquatic Chronic 3 - H412

The full text for all hazard statements is displayed in Section 16.

Product name

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

REACH registration number

01-2119489463-28-XXXX

CAS number

85586-07-8

EC number

287-809-4

Composition comments

The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures**4.1. Description of first aid measures**

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Inhalation	Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If it is suspected that airborne contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
Ingestion	Get medical attention immediately. Rinse mouth thoroughly with water. Remove any dentures. Give plenty of water to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated by a physician. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
Skin contact	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention immediately. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated by a physician. Wash clothing and clean shoes thoroughly before reuse.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse. Chemical burns must be treated by a physician.
Protection of first aiders	No action shall be taken without appropriate training or involving any personal risk. If it is suspected that airborne contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves.

4.2. Most important symptoms and effects, both acute and delayed

Ingestion	Harmful if swallowed. Overexposure may cause the following adverse effects: Stomach pain.
Skin contact	Causes skin irritation. Overexposure may cause the following adverse effects: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. May cause chemical eye burns. Overexposure may cause the following adverse effects: Pain. Profuse watering of the eyes. Redness.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically. Contact specialist immediately poison treatment if large quantities have been ingested or inhaled
-----------------------------	--

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Specific hazards	When heated and in case of fire, toxic vapours/gases may be formed. Harmful to aquatic life with long lasting effects. Fire-water run-off in sewers may create fire or explosion hazard.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Metal oxide(s). Oxides of the following substances: Carbon. Sulphur.
<u>5.3. Advice for firefighters</u>	
Protective actions during firefighting	No action shall be taken without appropriate training or involving any personal risk. Evacuate area.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of dust and contact with skin and eyes. No action shall be taken without appropriate training or involving any personal risk. Evacuate area. Keep unnecessary and unprotected personnel away from the spillage. Do not touch or walk into spilled material. If ventilation is inadequate, suitable respiratory protection must be worn.
-----------------------------	--

6.2. Environmental precautions

Environmental precautions	Harmful to aquatic life with long lasting effects. Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
----------------------------------	---

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Move containers from spillage area. Approach the spillage from upwind. Avoid generation and spreading of dust. Remove spillage with vacuum cleaner or collect with a shovel and broom, or similar. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Avoid the spillage or runoff entering drains, sewers or watercourses. Flush contaminated area with plenty of water.
--------------------------------	--

6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. For waste disposal, see Section 13.
------------------------------------	---

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of dust and contact with skin and eyes. Avoid release to the environment. If ventilation is inadequate, suitable respiratory protection must be worn. Container must be kept tightly closed when not in use. Product residues retained in emptied containers can be hazardous. Do not reuse empty containers.
Advice on general occupational hygiene	Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene procedures should be implemented.

7.2. Conditions for safe storage, including any incompatibilities

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Storage precautions

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Avoid exposure to high temperatures or direct sunlight. Store away from incompatible materials (see Section 10). Keep away from food and drink. Store locked up. Container must be kept tightly closed when not in use. Keep containers upright. Only store in correctly labelled containers. Use appropriate containment to avoid environmental contamination.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Ingredient comments

No exposure limits known for ingredient(s).

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS (CAS: 85586-07-8)

Ingredient comments

No exposure limits known for ingredient(s).

DNEL

Industry - Inhalation; Long term systemic effects: 285 mg/m³
 Industry - Dermal; Long term systemic effects: 4060 ppm
 General population - Inhalation; Long term systemic effects: 85 mg/m³
 General population - Dermal; Long term systemic effects: 2440 mg/kg/day
 General population - Oral; Long term systemic effects: 24 mg/kg/day

PNEC

- Fresh water; 0.131 mg/l
 - marine water; 0.013 mg/l
 - STP; 1.35 mg/l
 - Sediment (Freshwater); 4.61 mg/kg
 - Sediment (Marinewater); 0.461 mg/kg
 - Soil; 0.846 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. The selected gloves should have a breakthrough time of at least 8 hours. Butyl rubber. Viton rubber (fluoro rubber). Nitrile rubber. Neoprene. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear appropriate clothing to prevent repeated or prolonged skin contact.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Hygiene measures	When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas. Eye wash facilities and emergency shower must be available when handling this product.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m ³ . Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. High-efficiency particulate filter. EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Solid Granules.
Colour	White. to Light (or pale). Yellow. to Yellow.
Odour	Characteristic. Slight.
Odour threshold	No information available.
pH	pH (diluted solution): 7.5 - 10.5 (1%)
Melting point	5 - 102°C
Pour Point	No information available.
Freezing Point	5 - 102°C
Initial boiling point and range	>187°C
Flash point	206.5°C Closed cup.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	Not applicable.
Other flammability	No information available.
Vapour pressure	<0.00018 kPa @ 20°C
Vapour density	Not applicable.
Relative density	~ 1.155 @ 20°C
Bulk density	No information available.
Solubility(ies)	Soluble in water.
Partition coefficient	log Pow: < -2.42
Auto-ignition temperature	>302°C
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	Not considered to be explosive.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Explosive under the influence of a flame No information available.

Oxidising properties No information available.

9.2. Other information

Other information No information available.

Refractive index No information available.

Particle size No information available.

Molecular weight No information available.

Volatility No information available.

Saturation concentration No information available.

Critical temperature No information available.

Volatile organic compound No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid No information available.

10.5. Incompatible materials

Materials to avoid No information available.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Metal oxides. Oxides of the following substances: Carbon. Sulphur.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Harmful if swallowed. LD₅₀ 2000 mg/kg, Oral, Rat

ATE oral (mg/kg) 2,000.0

Acute toxicity - dermal

Notes (dermal LD₅₀) No information available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No information available.

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Animal data	Erythema/eschar score: Moderate to severe erythema (3). Not irritating.
<u>Serious eye damage/irritation</u>	
Summary	Based on test results, active ingredient of this product (active matter in water): - at a concentration < 10% does not cause eye irritation or serious eye damage (Hazard category: not classified) - at a concentration ≥ 10% and < 20% causes eye irritation (Hazard category: Eye irritant cat.2/H319) - at a concentration ≥ 20% causes serious eye damage (Hazard category: Eye damage cat.1/H318)
Serious eye damage/irritation	Causes serious eye damage.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	No information available.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative. OECD 471
<u>Carcinogenicity</u>	
Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No information available.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No information available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	No information available.
<u>Aspiration hazard</u>	
Aspiration hazard	No information available.
<u>Toxicokinetics</u>	
	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Inhalation	Dust in high concentrations may irritate the respiratory system.
Ingestion	Harmful if swallowed. Overexposure may cause the following adverse effects: Stomach pain.
Skin contact	Causes skin irritation. Overexposure may cause the following adverse effects: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. May cause chemical eye burns. Overexposure may cause the following adverse effects: Pain. Profuse watering of the eyes. Redness.

Toxicological information on ingredients.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Acute toxicity - oral

Acute toxicity oral (LD₅₀ 2,000.0
mg/kg)

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Species	Rat
Notes (oral LD₅₀)	Harmful if swallowed. LD ₅₀ 2000 mg/kg, Oral, Rat
ATE oral (mg/kg)	2,000.0
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	No information available.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	No information available.
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Causes skin irritation.
Animal data	Erythema/eschar score: Moderate to severe erythema (3). Irritating.
<u>Serious eye damage/irritation</u>	
Summary	Based on test results, active ingredient of this product (active matter in water): - at a concentration < 10% does not cause eye irritation or serious eye damage (Hazard category: not classified) - at a concentration ≥ 10% and < 20% causes eye irritation (Hazard category: Eye irritant cat.2/H319) - at a concentration ≥ 20% causes serious eye damage (Hazard category: Eye damage cat.1/H318)
Serious eye damage/irritation	Causes serious eye damage.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	No information available.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative. OECD 471
<u>Carcinogenicity</u>	
Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No information available.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No information available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	No information available.
<u>Aspiration hazard</u>	
Aspiration hazard	No information available.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Toxicokinetics	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Inhalation	Dust in high concentrations may irritate the respiratory system.
Ingestion	Harmful if swallowed. Overexposure may cause the following adverse effects: Stomach pain.
Skin contact	Causes skin irritation. Overexposure may cause the following adverse effects: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. May cause chemical eye burns. Overexposure may cause the following adverse effects: Pain. Profuse watering of the eyes. Redness.

SECTION 12: Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Ecotoxicity Harmful to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Toxicity Harmful to aquatic life with long lasting effects.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 3.6 mg/l, Fish
OECD 203

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 4.7 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 20 mg/l, Freshwater algae
OECD 201

12.2. Persistence and degradability

Persistence and degradability The product is readily biodegradable. This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.

Ecological information on ingredients.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Persistence and degradability	The substance is readily biodegradable. This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.
Biodegradation	- Degradation (%) > 60: 28 days OECD 301B

12.3. Bioaccumulative potential

Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient	log Pow: < -2.42

Ecological information on ingredients.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.
Partition coefficient	log Pow: < - 2.42

12.4. Mobility in soil

Mobility	The product is soluble in water.
-----------------	----------------------------------

Ecological information on ingredients.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Mobility	The product is soluble in water.
-----------------	----------------------------------

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.
---	---

Ecological information on ingredients.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.
---	---

12.6. Other adverse effects

Other adverse effects	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
------------------------------	---

Ecological information on ingredients.

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Other adverse effects	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
------------------------------	---

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty.
----------------------------	---

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
COMMISSION REGULATION (EU) 2020/878 of 18 June 2020
Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents (as amended).

Health and environmental listings

This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

Canada - DSL/NDSL

All the ingredients are listed or exempt.
DSL

US - TSCA

All the ingredients are listed or exempt.

Australia - AICS

All the ingredients are listed or exempt.

Japan - ENCS

All the ingredients are listed or exempt.

Korea - KECI

All the ingredients are listed or exempt.

China - IECSC

All the ingredients are listed or exempt.

Philippines – PICCS

All the ingredients are listed or exempt.

New Zealand - NZIOC

All the ingredients are listed or exempt.

Taiwan - TCSI

All the ingredients are listed or exempt.

SECTION 16: Other information

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Classification procedures according to Regulation (EC) 1272/2008

Acute Tox. 4 - H302: On basis of test data. Skin Irrit. 2 - H315: On basis of test data. Eye Dam. 1 - H318: On basis of test data. Aquatic Chronic 3 - H412: Calculation method.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

21/01/2023

SULFURIC ACID, MONO-C12-14-ALKYL ESTERS, SODIUM SALTS

Version number	4.000
Supersedes date	24/03/2021
SDS number	51922
SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage. H412 Harmful to aquatic life with long lasting effects.
Signature	Lisa Bland

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



Exposure scenario

End use of Cosmetic products

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	End use of Cosmetic products
Product category	PC39 Cosmetics, personal care.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
--------------------------------	---

2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Product characteristics

Physical state	Liquid
	Substance is complex UVCB.

Amounts used

Fraction of Regional tonnage used locally: 10%

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0%
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 100%
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0%

Environmental factors not influenced by risk management measures

End use of Cosmetic products

Dilution Receiving surface water flow: 18000 m³/day

Risk management measures

STP type Municipal STP.

STP details Assumed domestic sewage treatment plant flow: 2000 m³/day

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Control of Non-industrial exposure

Consumer uses e.g. as a carrier in cosmetics/personal care products, perfumes and fragrances. Note: for cosmetic and personal care products, risk assessment only required for the environment under REACH as human health is covered by alternative legislation.

3. Exposure estimation (Environment 1)

Assessment method EASY TRA v2.0

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.



Exposure scenario

Consumer use of washing and cleaning products

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Consumer use of washing and cleaning products
Product category	PC35 Washing and cleaning products
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
--------------------------------	---

2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Product characteristics

Physical state	Liquid
----------------	--------

Amounts used

Fraction of Regional tonnage used locally: 10%

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0%
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 100%
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0%

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
----------	---

Consumer use of washing and cleaning products

Risk management measures

STP type Municipal STP.

STP details Assumed domestic sewage treatment plant flow: 2000 m³/day

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state Liquid

Human factors not influenced by risk management

Potentially exposed body parts Both hands.

Other given operational conditions affecting Non-industrial exposure

Setting Indoor/outdoor use.

Temperature Assumes activities are at ambient temperature (unless stated differently).

Room size Covers use in room size of 20 m³.

Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method EASY TRA v2.0

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

3. Exposure estimation (Health 1)

Assessment method EASY TRA v2.0

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Formulation of Detergents/Maintenance Products

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Formulation of Detergents/Maintenance Products
Main sector	SU3 Industrial uses
Sector of use	SU5 Manufacture of textiles, leather, fur

Environment

Environmental release category	ERC2 Formulation into mixture
--------------------------------	-------------------------------

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC14 Tableting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.
------------------	--

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Solid , or: Liquid
----------------	--------------------

Formulation of Detergents/Maintenance Products

Amounts used

Fraction of Regional tonnage used locally: 100%

Frequency and duration of use

Emission days: 220 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0.02%
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.001%
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0%

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
----------	---

Risk management measures

STP type	Municipal STP.
STP details	Assumed onsite sewage treatment plant flow: 2000 m ³ /day

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Solid , or: Liquid
----------------	--------------------

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting	Indoor.
Temperature	Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.
-------------------------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented. Ensure operatives are trained to minimise exposures.
-------------------------	--

Risk management measures

Wear suitable gloves (tested to EN374), coverall and eye protection.

3. Exposure estimation (Environment 1)

Assessment method	EASY TRA v2.0
-------------------	---------------

Formulation of Detergents/Maintenance Products

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

3. Exposure estimation (Health 1)

Assessment method

EASY TRA v2.0

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Formulation of Creams and Body care products

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Formulation of Creams and Body care products
Main sector	SU3 Industrial uses
Sector of use	SU9 Manufacture of fine chemicals

Environment

Environmental release category	ERC2 Formulation into mixture
--------------------------------	-------------------------------

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC14 Tableting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.
------------------	--

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Solid , or: Liquid
----------------	--------------------

Formulation of Creams and Body care products

Amounts used

Fraction of Regional tonnage used locally: 100%

Frequency and duration of use

Emission days: 220 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0%
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 1%
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0%

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
----------	---

Risk management measures

STP type	Municipal STP.
STP details	Assumed onsite sewage treatment plant flow: 2000 m ³ /day

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Solid , or: Liquid
----------------	--------------------

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting	Indoor.
Temperature	Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.
-------------------------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented. Ensure operatives are trained to minimise exposures.
-------------------------	--

Risk management measures

Wear suitable gloves (tested to EN374), coverall and eye protection.

3. Exposure estimation (Environment 1)

Assessment method	EASY TRA v2.0
-------------------	---------------

Formulation of Creams and Body care products

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

3. Exposure estimation (Health 1)

Assessment method

EASY TRA v2.0

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Formulation of Non-Volatile substance for Construction Chemicals

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Formulation of Non-Volatile substance for Construction Chemicals
Main sector	SU3 Industrial uses
Sector of use	SU9 Manufacture of fine chemicals

Environment

Environmental release category	ERC2 Formulation into mixture
--------------------------------	-------------------------------

Worker

Process category	PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC5 Mixing or blending in batch processes PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
------------------	--

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	The product is non-volatile.
----------------	------------------------------

Amounts used

Fraction of Regional tonnage used locally: 100%

Frequency and duration of use

Emission days: 220 days/year

Formulation of Non-Volatile substance for Construction Chemicals

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0%
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0.5%
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0%

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
----------	---

Risk management measures

STP type	Municipal STP.
STP details	Assumed onsite sewage treatment plant flow: 2000 m ³ /day

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	The product is non-volatile.
----------------	------------------------------

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).
 PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 Covers daily exposure up to 4hours

Other given operational conditions affecting workers exposure

Setting	Indoor.
Temperature	Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.
-------------------------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented. Ensure operatives are trained to minimise exposures.
-------------------------	--

Risk management measures

Wear suitable gloves (tested to EN374), coverall and eye protection.

3. Exposure estimation (Environment 1)

Assessment method	EASY TRA v2.0
	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

Formulation of Non-Volatile substance for Construction Chemicals

3. Exposure estimation (Health 1)

Assessment method

EASY TRA v2.0

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Industrial Use of washing and cleaning products

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Industrial Use of washing and cleaning products
Main sector	SU3 Industrial uses
Sector of use	SU5 Manufacture of textiles, leather, fur

Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article) ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
--------------------------------	--

Worker

Process category	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC4 Chemical production where opportunity for exposure arises PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing
------------------	--

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
----------------	--------

Industrial Use of washing and cleaning products

Concentration details

Covers concentrations up to 20 %.

Amounts used

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 Fraction of Regional tonnage used locally: 100%
 ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
 Fraction of Regional tonnage used locally: 100%
 ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
 Fraction of Regional tonnage used locally: 10%

Frequency and duration of use

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 Emission days: 220 days/year
 ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
 Emission days: 20 days/year
 ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
 Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 Release fraction to air from process (initial release prior to RMM): 0%
 ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
 Release fraction to air from process (initial release prior to RMM): 0.1%
 ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
 Release fraction to air from process (initial release prior to RMM): 0%

Emission factor - water

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 Release fraction to wastewater from process (initial release prior to RMM): 100%
 ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
 Release fraction to wastewater from process (initial release prior to RMM): 5%
 ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
 Release fraction to wastewater from process (initial release prior to RMM): 100%

Emission factor - soil

ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 Release fraction to soil from process (initial release prior to RMM): 0%
 ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
 Release fraction to soil from process (initial release prior to RMM): 0.025%
 ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
 Release fraction to soil from process (initial release prior to RMM): 0%

Environmental factors not influenced by risk management measures

Dilution

Receiving surface water flow: 18000 m³/day

Risk management measures

STP type

Municipal STP.

STP details

Assumed onsite sewage treatment plant flow: 2000 m³/day

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Industrial Use of washing and cleaning products

Physical state Liquid

Concentration details Covers concentrations up to 20 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Covers daily exposure up to 5minutes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

Covers daily exposure up to 30minutes

Other given operational conditions affecting workers exposure

Setting Indoor/outdoor use.

Temperature Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented. Ensure operatives are trained to minimise exposures.

Risk management measures

Wear suitable gloves (tested to EN374), coverall and eye protection.

3. Exposure estimation (Environment 1)

Assessment method EASY TRA v2.0

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

3. Exposure estimation (Health 1)

Assessment method EASY TRA v2.0

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Industrial use of non-volatile substances in Construction Chemicals

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Industrial use of non-volatile substances in Construction Chemicals
Main sector	SU3 Industrial uses
Sector of use	SU19 Building and construction work

Environment

Environmental release category	ERC5 Use at industrial site leading to inclusion into/onto article
--------------------------------	--

Worker

Process category	PROC7 Industrial spraying PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC14 Tableting, compression, extrusion, pelletisation, granulation
------------------	--

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	The product is non-volatile.
Concentration details	Covers concentrations up to 100 %.

Amounts used

Fraction of Regional tonnage used locally: 100%

Frequency and duration of use

Emission days: 220 days/year

Industrial use of non-volatile substances in Construction Chemicals

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 1.7%
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0%
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 100%

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
----------	---

Risk management measures

STP type	Municipal STP.
STP details	Assumed onsite sewage treatment plant flow: 2000 m ³ /day

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	The product is non-volatile.
----------------	------------------------------

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting	Indoor/outdoor use.
Temperature	Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.
-------------------------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented. Ensure operatives are trained to minimise exposures.
-------------------------	--

Risk management measures

Wear suitable gloves (tested to EN374), coverall and eye protection.
 PROC7 Industrial spraying
 Wear a respirator providing a minimum efficiency of (%): 95

3. Exposure estimation (Environment 1)

Assessment method	EASY TRA v2.0
	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

3. Exposure estimation (Health 1)

Industrial use of non-volatile substances in Construction Chemicals

Assessment method

EASY TRA v2.0

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Professional Use of Washing and cleaning products

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Professional Use of Washing and cleaning products
Main sector	SU3 Industrial uses SU22 Professional uses
Sector of use	SU5 Manufacture of textiles, leather, fur

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
--------------------------------	--

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC19 Manual activities involving hand contact
------------------	---

2. Conditions of use affecting exposure (Industrial - Environment 1)

Professional Use of Washing and cleaning products

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 20 %.

Amounts used

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
 ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
 Fraction of Regional tonnage used locally: 10%
 ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
 Fraction of Regional tonnage used locally: 10%

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor) Release fraction to air from process (initial release prior to RMM): 0% ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) Release fraction to air from process (initial release prior to RMM): 100%
Emission factor - water	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor) Release fraction to wastewater from process (initial release prior to RMM): 100% ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) Release fraction to wastewater from process (initial release prior to RMM): 100%
Emission factor - soil	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor) Release fraction to soil from process (initial release prior to RMM): 0% ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) Release fraction to soil from process (initial release prior to RMM): 20%

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
----------	---

Risk management measures

STP type	Municipal STP.
STP details	Assumed onsite sewage treatment plant flow: 2000 m ³ /day

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 20 %.

Frequency and duration of use

Professional Use of Washing and cleaning products

Covers daily exposures up to 8 hours (unless stated differently).

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Covers daily exposure up to 1minutes

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Covers daily exposure up to 5minutes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Covers daily exposure up to 30minutes

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

Covers daily exposure up to 10minutes

PROC13 Treatment of articles by dipping and pouring.

Covers daily exposure up to 1hour

PROC19 Manual activities involving hand contact

Covers daily exposure up to 40minutes

Other given operational conditions affecting workers exposure

Setting Indoor/outdoor use.

Temperature Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented. Ensure operatives are trained to minimise exposures.

Risk management measures

Wear suitable gloves (tested to EN374), coverall and eye protection.

Wear suitable gloves tested to EN374.

Efficiency of at least 80%

, or:

Avoid carrying out operation for more than 10 minutes.

3. Exposure estimation (Environment 1)

Assessment method EASY TRA v2.0

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

3. Exposure estimation (Health 1)

Assessment method EASY TRA v2.0

Professional Use of Washing and cleaning products

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Formulation and (re)packing of substances and mixtures

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Formulation and (re)packing of substances and mixtures
Main sector	SU3 Industrial uses SU21 Consumer uses
Sector of use	SU5 Manufacture of textiles, leather, fur

Environment

Environmental release category	ERC2 Formulation into mixture
--------------------------------	-------------------------------

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC14 Tableting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.
------------------	---

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Formulation and (re)packing of substances and mixtures

Physical state Solid , or: Liquid

Amounts used

Fraction of Regional tonnage used locally: 100%

Frequency and duration of use

Emission days: 220 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 0.25%

Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.5%

Emission factor - soil Release fraction to soil from process (initial release prior to RMM): 0.01%

Environmental factors not influenced by risk management measures

Dilution Receiving surface water flow: 18000 m³/day

Risk management measures

STP type Municipal STP.

STP details Assumed onsite sewage treatment plant flow: 2000 m³/day

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Solid , or: Liquid

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures No specific risk management measure identified beyond those operational conditions stated. Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented. Ensure operatives are trained to minimise exposures.

Risk management measures

Wear suitable gloves (tested to EN374), coverall and eye protection.

3. Exposure estimation (Environment 1)

Formulation and (re)packing of substances and mixtures

Assessment method

EASY TRA v2.0

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

3. Exposure estimation (Health 1)**Assessment method**

EASY TRA v2.0

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use as binders and release agents in industrial settings

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use as binders and release agents in industrial settings
Main sector	SU3 Industrial uses SU21 Consumer uses
Sector of use	SU5 Manufacture of textiles, leather, fur

Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
--------------------------------	--

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC6 Calendering operations. PROC7 Industrial spraying PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC14 Tableting, compression, extrusion, pelletisation, granulation
------------------	--

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Use as binders and release agents in industrial settings

Concentration details Covers concentrations up to 20 %.

Amounts used

Fraction of Regional tonnage used locally: 100%

Frequency and duration of use

Emission days: 100 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 20%

Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.1%

Emission factor - soil Release fraction to soil from process (initial release prior to RMM): 0%

Environmental factors not influenced by risk management measures

Dilution Receiving surface water flow: 18000 m³/day

Risk management measures

STP type Municipal STP.

STP details Assumed onsite sewage treatment plant flow: 2000 m³/day

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Concentration details Covers concentrations up to 20 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented. Ensure operatives are trained to minimise exposures.

Risk management measures

Wear suitable gloves (tested to EN374), coverall and eye protection.

3. Exposure estimation (Environment 1)

Assessment method EASY TRA v2.0

Use as binders and release agents in industrial settings

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

3. Exposure estimation (Health 1)

Assessment method

EASY TRA v2.0

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Industrial Use of Substances other than Solvents in Paper, Board and related Products

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Industrial Use of Substances other than Solvents in Paper, Board and related Products
Main sector	SU3 Industrial uses
Sector of use	SU5 Manufacture of textiles, leather, fur SU21 Consumer uses

Environment

Environmental release category	ERC5 Use at industrial site leading to inclusion into/onto article
--------------------------------	--

Worker

Process category	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC7 Industrial spraying PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC14 Tableting, compression, extrusion, pelletisation, granulation
------------------	---

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Concentration details	Covers concentrations up to 100 %.
-----------------------	------------------------------------

Amounts used

Industrial Use of Substances other than Solvents in Paper, Board and related Products

Fraction of Regional tonnage used locally: 100%

Frequency and duration of use

Emission days: 220 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 0.9%
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 0%
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0%

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
----------	---

Risk management measures

STP type	Municipal STP.
STP details	Assumed onsite sewage treatment plant flow: 2000 m ³ /day

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Concentration details	Covers concentrations up to 100 %.
-----------------------	------------------------------------

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting	Indoor.
Temperature	Assumes activities are at ambient temperature (unless stated differently).
Ventilation rate	Provide extract ventilation to points where emissions occur.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.
-------------------------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented. Ensure operatives are trained to minimise exposures.
-------------------------	--

Risk management measures

Wear suitable coveralls to prevent exposure to the skin.
 Use suitable eye protection.
 Wear a respirator providing a minimum efficiency of (%): 90
 Wear suitable gloves tested to EN374.
 Efficiency of at least 80%

Industrial Use of Substances other than Solvents in Paper, Board and related Products

3. Exposure estimation (Environment 1)

Assessment method EASY TRA v2.0

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

3. Exposure estimation (Health 1)

Assessment method EASY TRA v2.0

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Application of processing aids

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Application of processing aids
Product category	PC24 Lubricants, greases and release products. PC34 Textile dyes and impregnating products
Main sector	SU3 Industrial uses
Sector of use	SU5 Manufacture of textiles, leather, fur SU21 Consumer uses

Environment

Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
--------------------------------	--

Worker

Process category	PROC7 Industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations
------------------	---

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Concentration details	Covers concentrations up to 100 %.
-----------------------	------------------------------------

Amounts used

Fraction of Regional tonnage used locally: 100%

Frequency and duration of use

Emission days: 20 days/year

Application of processing aids

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 100%
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 100%
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 5%

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
----------	---

Risk management measures

STP type	Municipal STP.
STP details	Assumed onsite sewage treatment plant flow: 2000 m ³ /day

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Concentration details	Covers concentrations up to 100 %.
-----------------------	------------------------------------

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting	Indoor.
Temperature	Assumes activities are at ambient temperature (unless stated differently).
Ventilation rate	Provide extract ventilation to points where emissions occur.

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.
-------------------------------	---

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	Assumes a good basic standard of occupational hygiene is implemented. Ensure operatives are trained to minimise exposures.
-------------------------	--

Risk management measures

Wear suitable coveralls to prevent exposure to the skin.
Use suitable eye protection.
Wear suitable gloves tested to EN374.
Efficiency of at least 80%

3. Exposure estimation (Environment 1)

Assessment method	EASY TRA v2.0
	Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

Application of processing aids

3. Exposure estimation (Health 1)

Assessment method

EASY TRA v2.0

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Professional / Consumer use in Construction Chemicals: Wide dispersive use of non-volatile substances

Identification

Product name	SULFURIC ACID, MONO C12-14 ALKYL ESTERS, SODIUM SALT
REACH registration number	01-2119489463-28-XXXX
CAS number	85586-07-8
EC number	287-809-4
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Professional / Consumer use in Construction Chemicals: Wide dispersive use of non-volatile substances
Product category	PC1 Adhesives, sealants. PC9a Coatings and paints, thinners, paint removers. PC9b Fillers, putties, plasters, modelling clay.
Main sector	SU21 Consumer uses SU22 Professional uses

Environment

Environmental release category	ERC8c Widespread use leading to inclusion into/onto article (indoor) ERC8f Widespread use leading to inclusion into/onto article (outdoor)
--------------------------------	---

Worker

Process category	PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.
------------------	---

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	The product is non-volatile.
Concentration details	Covers concentrations up to 100 %.

Amounts used

Professional / Consumer use in Construction Chemicals: Wide dispersive use of non-volatile substances

Fraction of Regional tonnage used locally: 10%

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	ERC8c Widespread use leading to inclusion into/onto article (indoor) Release fraction to air from process (initial release prior to RMM): 0% ERC8f Widespread use leading to inclusion into/onto article (outdoor) Release fraction to air from process (after typical onsite RMMs): 0%
Emission factor - water	ERC8c Widespread use leading to inclusion into/onto article (indoor) Release fraction to wastewater from process (initial release prior to RMM): 1% ERC8f Widespread use leading to inclusion into/onto article (outdoor) Release fraction to wastewater from process (initial release prior to RMM): 1%
Emission factor - soil	ERC8c Widespread use leading to inclusion into/onto article (indoor) Release fraction to soil from process (initial release prior to RMM): 0% ERC8f Widespread use leading to inclusion into/onto article (outdoor) Release fraction to soil from process (initial release prior to RMM): 3.7%

Environmental factors not influenced by risk management measures

Dilution Receiving surface water flow: 18000 m³/day

Risk management measures

STP type Municipal STP.
STP details Assumed onsite sewage treatment plant flow: 2000 m³/day

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state The product is non-volatile.

Human factors not influenced by risk management

Potentially exposed body parts Both hands.

Other given operational conditions affecting Non-industrial exposure

Setting Indoor/outdoor use.
Temperature Assumes activities are at ambient temperature (unless stated differently).
Room size Covers use in room size of 20 m³.

Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method EASY TRA v2.0
Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination.

3. Exposure estimation (Health 1)

Professional / Consumer use in Construction Chemicals: Wide dispersive use of non-volatile substances

Assessment method

EASY TRA v2.0

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.