SAFETY DATA SHEET
According to EC No 1907/2006 as amended as at the date of this SDS

NEODOL 23-1

Version	Revision Date:	SDS Number:	Date of last issue: 17.11.2023
3.0	24.01.2024	800001000986	Print Date 31.01.2024

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

1.1 Product identifier

Trade name	:	NEODOL 23-1
Product code	:	V2596
Registration number EU	:	01-2119490233-42-0001
Synonyms	:	Alcohols, C12-13, ethoxylated
CAS-No.	:	160901-19-9
EC-No.	:	500-457-0

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

Use of the Substance/Mixture	:	Use in detergent and intermediate manufacture Please refer to section 16 and/or the annexes for the registered uses under REACH.
Uses advised against	:	This product must not be used in applications other than the above without first seeking the advice of the supplier.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier	:	**Shell Chemicals Europe B.V.** PO Box 2334 3000 CH Rotterdam Netherlands
Telephone	:	+31 (0)10 441 5137 / +31 (0)10 441 5191
Telefax	:	+31 (0)20 716 8316 / +31 (0)20 713 9230
Contact for Safety Data Sheet	:	sccmsds@shell.com

1.4 Emergency telephone number

+44 (0) 1235 239 670 (This telephone number is available 24 hours per day, 7 days per week)
Poisons Centre: 070 245 245

Other information	:	NEODOL is a trademark owned by Shell Trademark Management B.V. and Shell Brands Inc. and used by affiliates of Royal Dutch Shell plc.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements :

PHYSICAL HAZARDS:
Not classified as a physical hazard according to CLP criteria.
HEALTH HAZARDS:
Not classified as a health hazard under CLP criteria.
ENVIRONMENTAL HAZARDS:
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:
P273 Avoid release to the environment.

Response:
P391 Collect spillage.

Storage:
No precautionary phrases.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.

Ecological information: 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.

Toxicological information: 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.

Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients

3.1 Substances

Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
Alcohols, C12-13, branched & linear, ethoxylated	160901-19-9 500-457-0	<= 100

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Not expected to be a health hazard when used under normal conditions.

Protection of first-aiders : When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

If inhaled : No treatment necessary under normal conditions of use.
If symptoms persist, obtain medical advice.

In case of skin contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
If persistent irritation occurs, obtain medical attention.

In case of eye contact : Flush eye with copious quantities of water.
Remove contact lenses, if present and easy to do. Continue rinsing.
If persistent irritation occurs, obtain medical attention.

If swallowed : In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Not considered to be an inhalation hazard under normal conditions of use.
Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.

No specific hazards under normal use conditions.
Skin irritation signs and symptoms may include a burning sensation, redness, or swelling.

No specific hazards under normal use conditions.
Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

No specific hazards under normal use conditions.
Ingestion may result in nausea, vomiting and/or diarrhoea.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Call a doctor or poison control center for guidance.
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media : Do not use water in a jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Carbon monoxide may be evolved if incomplete combustion occurs.
Will float and can be reignited on surface water.
The vapour is heavier than air, spreads along the ground and distant ignition is possible.

5.3 Advice for firefighters

Special protective equipment for firefighters : Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

Specific extinguishing methods : Standard procedure for chemical fires.

Further information : Clear fire area of all non-emergency personnel.
Keep adjacent containers cool by spraying with water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Observe all relevant local and international regulations.
Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Local authorities should be advised if significant spillages cannot be contained.
6.1.1 For non emergency personnel:
Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.
Stay upwind and keep out of low areas.
Be ready for fire or possible exposure.
6.1.2 For emergency responders:
Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.
Stay upwind and keep out of low areas.
Be ready for fire or possible exposure.

6.2 Environmental precautions

Environmental precautions : Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Use appropriate containment to avoid environmental contamination.
Ventilate contaminated area thoroughly.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely
For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

6.4 Reference to other sections

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet., For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.

Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Ensure that all local regulations regarding handling and storage facilities are followed.

Advice on safe handling : Avoid contact with skin, eyes and clothing.
Do not empty into drains.
Sudden Release of Pressure Hazard

Product Transfer : Keep containers closed when not in use. Do not use compressed air for filling discharge or handling.

Hygiene measures : Wash hands before eating, drinking, smoking and using the toilet. Launder contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Further information on storage stability : Bulk storage tanks should be diked (bunded).
Vapours from tanks should not be released to atmosphere.
Breathing losses during storage should be controlled by a suitable vapour treatment system.
Nitrogen blanket recommended for large tanks (capacity 100 m3 or higher).
Insulation (lagging) will minimize heat loss in areas of low ambient temperature.
Tanks should be fitted with heating coils in areas where ambient conditions can result in handling temperatures below the freezing point/pour point of the product.

Packaging material : Suitable material: Stainless steel., Epoxy resins, Polyester.
Unsuitable material: Aluminum, Copper., Copper alloys.

Container Advice : Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

7.3 Specific end use(s)

Specific use(s) : Please refer to section 16 and/or the annexes for the registered uses under REACH.

Ensure that all local regulations regarding handling and storage facilities are followed.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Biological occupational exposure limits

No biological limit allocated.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Alcohols, C12-13, ethoxylated, 160901-19-9	Workers	Dermal	Long-term systemic effects	2080 mg/kg bw/day
Alcohols, C12-13, ethoxylated, 160901-19-9	Workers	Inhalation	Long-term systemic effects	294 mg/m3
Alcohols, C12-13, ethoxylated, 160901-19-9	Consumers	Dermal	Long-term systemic effects	1250 mg/kg bw/day
Alcohols, C12-13, ethoxylated, 160901-19-9	Consumers	Inhalation	Long-term systemic effects	87 mg/m3
Alcohols, C12-13, ethoxylated, 160901-19-9	Consumers	Oral	Long-term systemic effects	25 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Alcohols, C12-13, branched & linear, ethoxylated	Fresh water	0,00123 mg/l
Alcohols, C12-13, branched & linear, ethoxylated	Intermittent use/release	0,001795 mg/l
Alcohols, C12-13, branched & linear, ethoxylated	Marine water	0,000123 mg/l
Alcohols, C12-13, branched & linear, ethoxylated	Intermittent use/release	0,000179 mg/l
Alcohols, C12-13, branched & linear, ethoxylated	Fresh water sediment	0,029 mg/kg
Alcohols, C12-13, branched & linear, ethoxylated	Marine sediment	0,0029 mg/kg
Alcohols, C12-13, branched & linear, ethoxylated	Sewage treatment plant	0,2 mg/l
Alcohols, C12-13, branched & linear, ethoxylated	Soil	0,0086 mg/kg

8.2 Exposure controls

Engineering measures

Read in conjunction with the Exposure Scenario for your specific use contained in the Annex.
Adequate ventilation to control airborne concentrations.

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
Eye washes and showers for emergency use.
The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:

General Information:
Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.
Define procedures for safe handling and maintenance of controls.
Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
Drain down system prior to equipment break-in or maintenance.
Retain drain downs in sealed storage pending disposal or subsequent recycle.

Personal protective equipment

Read in conjunction with the Exposure Scenario for your specific use contained in the Annex. The provided information is made in consideration of the PPE directive (Council Directive 89/686/EEC) and the CEN European Committee for Standardisation (CEN) standards.

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Eye protection : If material is handled such that it could be splashed into eyes, protective eyewear is recommended.
Approved to EU Standard EN166.

Hand protection

Remarks : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. When prolonged or frequent repeated contact occurs. Nitrile rubber gloves. Incidental contact/Splash protection: PVC or neoprene rubber gloves. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and

duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Skin and body protection : Skin protection is not ordinarily required beyond standard work clothes.
It is good practice to wear chemical resistant gloves.
Protective clothing approved to EU Standard EN14605.

Respiratory protection : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation.
Check with respiratory protective equipment suppliers.
Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.
Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.
If air-filtering respirators are suitable for conditions of use:
Select a filter suitable for the combination of organic gases and vapours and particles meeting EN14387 and EN143
[Filter type A/P for use against certain organic gases and vapours with a boiling point >65°C (149°F) and for use against particles].

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	mild
Odour Threshold	:	Data not available
Melting / freezing point	:	1 °C
Boiling point/boiling range	:	> 490,0 °F
Flammability		
Flammability (solid, gas)	:	Not applicable

Lower explosion limit and upper explosion limit / flammability limit

Upper explosion limit / upper flammability limit	:	Data not available
Lower explosion limit / Lower flammability limit	:	Data not available
Flash point	:	148 °C
Auto-ignition temperature	:	Data not available
Decomposition temperature		
Decomposition temperature	:	Data not available
pH	:	6,8
Viscosity		
Viscosity, dynamic	:	35 mPa.s (20 °C) Method: ASTM D445
Viscosity, kinematic	:	12 mm2/s (40 °C) Method: ASTM D445
Solubility(ies)		
Water solubility	:	< 5 g/l slightly soluble (20 °C)
Solubility in other solvents	:	Data not available
Partition coefficient: n-octanol/water	:	log Pow: 3
Vapour pressure	:	< 0,1 hPa (37,8 °C)
Relative density	:	ca. 0,892 (104,0 °F) Method: ASTM D4052
Density	:	> 873 kg/m3 (40 °C) Method: ASTM D4052
Relative vapour density	:	Data not available
Particle characteristics		
Particle size	:	Data not available

9.2 Other information

Explosive properties	:	Not applicable
Oxidizing properties	:	Data not available

Evaporation rate	:	Data not available
Conductivity	:	Electrical conductivity: > 10,000 pS/m A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid, This material is not expected to be a static accumulator.
Surface tension	:	Data not available
Molecular weight	:	Data not available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable at normal ambient temperature and pressure.
May oxidise in the presence of air.

10.2 Chemical stability

The product is chemically stable.
Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : None known.

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid : Copper.
Copper alloys.
Strong oxidising agents.
Aluminum

10.6 Hazardous decomposition products

None expected under normal use conditions.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure : Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity	:	LD 50 (Rat, male and female): > 5.000 mg/kg Method: Test(s) equivalent or similar to OECD Test Guideline 401 Remarks: Based on available data, the classification criteria are not met. Low toxicity LD50 >5000 mg/kg
Acute inhalation toxicity	:	LC 50 (Rat, male and female): > 1,6 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Test(s) equivalent or similar to OECD Test Guideline 403 Remarks: Based on available data, the classification criteria are not met. LC50 greater than near-saturated vapour concentration. Low toxicity LC50 > 1.0 - <= 5.0 mg/l
Acute dermal toxicity	:	LD 50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 Remarks: Based on available data, the classification criteria are not met. May be harmful in contact with skin. LD50 >2000 - <=5000 mg/kg

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Acute oral toxicity	:	LD 50 (Rat, male and female): > 5.000 mg/kg Method: Test(s) equivalent or similar to OECD Test Guideline 401 Remarks: Based on available data, the classification criteria are not met. Low toxicity LD50 >5000 mg/kg
Acute inhalation toxicity	:	LC 50 (Rat, male and female): > 1,6 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Test(s) equivalent or similar to OECD Test Guideline 403 Remarks: Based on available data, the classification criteria are not met. LC50 greater than near-saturated vapour concentration. Low toxicity LC50 > 1.0 - <= 5.0 mg/l
Acute dermal toxicity	:	LD 50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 Remarks: Based on available data, the classification criteria are not met.

May be harmful in contact with skin.
LD50 >2000 - <=5000 mg/kg

Skin corrosion/irritation

Product:

Species	:	Rabbit
Method	:	Test(s) equivalent or similar to OECD Test Guideline 404
Remarks	:	Slightly irritating. Insufficient to classify.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Species	:	Rabbit
Method	:	Test(s) equivalent or similar to OECD Test Guideline 404
Remarks	:	Slightly irritating. Insufficient to classify.

Serious eye damage/eye irritation

Product:

Species	:	Rabbit
Method	:	Test(s) equivalent or similar to OECD Test Guideline 405
Remarks	:	Slightly irritating. Insufficient to classify.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Species	:	Rabbit
Method	:	Test(s) equivalent or similar to OECD Test Guideline 405
Remarks	:	Slightly irritating. Insufficient to classify.

Respiratory or skin sensitisation

Product:

Species	:	Guinea pig
Method	:	Test(s) equivalent or similar to OECD Test Guideline 406
Remarks	:	Based on available data, the classification criteria are not met. Not a sensitiser.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Species	:	Guinea pig
Method	:	Test(s) equivalent or similar to OECD Test Guideline 406
Remarks	:	Based on available data, the classification criteria are not met.

Not a sensitiser.

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	Method: Test(s) equivalent or similar to OECD Test Guideline 473 Remarks: Based on available data, the classification criteria are not met. Non mutagenic
Genotoxicity in vivo	:	Species: Mouse Method: OECD Test Guideline 474 Remarks: Based on available data, the classification criteria are not met. Non mutagenic
Germ cell mutagenicity- Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Genotoxicity in vitro	:	Method: Test(s) equivalent or similar to OECD Test Guideline 473 Remarks: Based on available data, the classification criteria are not met. Non mutagenic
Genotoxicity in vivo	:	Species: Mouse Method: OECD Test Guideline 474 Remarks: Based on available data, the classification criteria are not met. Non mutagenic
Germ cell mutagenicity- Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

Carcinogenicity

Product:

Method	:	Based on weight of evidence.
Remarks	:	Based on available data, the classification criteria are not met. Not a carcinogen.
Carcinogenicity - Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Method : Based on weight of evidence.
Remarks : Based on available data, the classification criteria are not met. Not a carcinogen.

Carcinogenicity - Assessment : This product does not meet the criteria for classification in categories 1A/1B.

Material	GHS/CLP Carcinogenicity Classification
Alcohols, C12-13, branched & linear, ethoxylated	No carcinogenicity classification.

Reproductive toxicity

Product:

Effects on fertility : Species: Rat
Sex: male and female
Application Route: Dermal

Method: Equivalent or similar to OECD Test Guideline 416
Remarks: Based on available data, the classification criteria are not met., Does not impair fertility.

Reproductive toxicity - Assessment : This product does not meet the criteria for classification in categories 1A/1B.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Effects on fertility : Species: Rat
Sex: male and female
Application Route: Dermal

Method: Equivalent or similar to OECD Test Guideline 416
Remarks: Based on available data, the classification criteria are not met., Does not impair fertility.

Reproductive toxicity - Assessment : This product does not meet the criteria for classification in categories 1A/1B.

STOT - single exposure

Product:

Remarks : Based on available data, the classification criteria are not met.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Remarks : Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Remarks : Based on available data, the classification criteria are not met.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Remarks : Based on available data, the classification criteria are not met.

Repeated dose toxicity

Product:

Species	:	Rat, male and female
Application Route	:	Oral
Method	:	Test(s) equivalent or similar to OECD Test Guideline 408
Target Organs	:	No specific target organs noted

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Species	:	Rat, male and female
Application Route	:	Oral
Method	:	Test(s) equivalent or similar to OECD Test Guideline 408
Target Organs	:	No specific target organs noted

Aspiration toxicity

Product:

Based on available data, the classification criteria are not met.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : 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.

Further information

Product:

Remarks : Classifications by other authorities under varying regulatory frameworks may exist.

Remarks : Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Remarks : Classifications by other authorities under varying regulatory frameworks may exist.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1,19 mg/l
Exposure time: 96 h
Method: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : (Daphnia magna (Water flea)): 0,238 mg/l
Exposure time: 48 h
Method: Information given is based on data obtained from similar substances.
Remarks: Very toxic.
LC/EC/IC50 < 1 mg/l

Toxicity to algae/aquatic plants : EC50 (Selenastrum capricornutum (green algae)): 0,179 mg/l
Exposure time: 72 h
Method: Information given is based on data obtained from similar substances.
Remarks: Very toxic.
LC/EC/IC50 < 1 mg/l

Toxicity to fish (Chronic toxicity) : NOEC: 0,328 mg/l
Exposure time: 28 d
Species: Pimephales promelas (fathead minnow)
Method: Based on quantitative structure-activity relationship (QSAR) modelling
Remarks: NOEC/NOEL > 0.1 - <=1.0 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,012 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: Information given is based on data obtained from similar substances. Remarks: NOEC/NOEL > 0.01 - <=0.1 mg/l
Toxicity to microorganisms	:	EC10 (Pseudomonas putida): > 10 g/l Exposure time: 16,9 h Method: Information given is based on data obtained from similar substances. Remarks: Practically non toxic: LC/EC/IC50 > 100 mg/l

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 0,96 mg/l Exposure time: 96 h Method: Test(s) equivalent or similar to OECD Guideline 203 Remarks: Very toxic. LC/EC/IC50 < 1 mg/l
Toxicity to daphnia and other aquatic invertebrates	:	(Daphnia magna (Water flea)): 0,46 mg/l Exposure time: 48 h Method: Test(s) equivalent or similar to OECD Guideline 202 Remarks: Very toxic. LC/EC/IC50 < 1 mg/l
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 0,069 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Very toxic. LC/EC/IC50 < 1 mg/l
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to microorganisms	:	EC10 (Pseudomonas putida): > 10 g/l Exposure time: 16,9 h Method: Test(s) equivalent or similar to OECD Guideline 209 Remarks: Practically non toxic: LC/EC/IC50 > 100 mg/l
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,16 mg/l Exposure time: 10 d Species: Lepomis macrochirus (Bluegill sunfish) Method: Information given is based on data obtained from similar substances. Remarks: NOEC/NOEL > 0.1 - <=1.0 mg/l
Toxicity to daphnia and other	:	NOEC: 0,0123 mg/l

aquatic invertebrates (Chronic toxicity)	Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Remarks: Toxic with long lasting effects: NOEC/NOEL > 0.01 - <=0.1 mg/l

12.2 Persistence and degradability

Product:

Biodegradability	:	Biodegradation: 85 % Exposure time: 28 d Method: OECD Test Guideline 301F

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Biodegradability	:	Biodegradation: 95 % Exposure time: 28 d Method: OECD Test Guideline 301F Remarks: Readily biodegradable.

12.3 Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: Biodegradation potential is based on data obtained from constituents or similar substances.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Bioaccumulation	:	Species: Pimephales promelas (fathead minnow) Exposure time: 24 d Bioconcentration factor (BCF): 12,7 Test substance: C12EO8 Method: Information given is based on data obtained from similar substances. Remarks: Bioaccumulation is unlikely to occur due to metabolism and excretion. Species: Pimephales promelas (fathead minnow) Exposure time: 24 d Bioconcentration factor (BCF): 232,5 Test substance: C13EO4 Method: Information given is based on data obtained from similar substances. Remarks: Bioaccumulation is unlikely to occur due to metabolism and excretion.

12.4 Mobility in soil

Product:

Mobility : Remarks: If the product enters soil, one or more constituents will or may be mobile and may contaminate groundwater., Floats on water.

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Mobility : Remarks: If the product enters soil, one or more constituents will or may be mobile and may contaminate groundwater., Floats on water.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB..

Components:

Alcohols, C12-13, branched & linear, ethoxylated:

Assessment : The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB..

12.6 Endocrine disrupting properties

Product:

Assessment : 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.

12.7 Other adverse effects

Product:

Additional ecological information : Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Recover or recycle if possible.
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to

determine the proper waste classification and disposal methods in compliance with applicable regulations.
Do not dispose into the environment, in drains or in water courses.
Waste product should not be allowed to contaminate soil or water.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local regulations may be more stringent than regional or national requirements and must be complied with.

Contaminated packaging : Drain container thoroughly.
After draining, vent in a safe place away from sparks and fire.
Residues may cause an explosion hazard.
Do not puncture, cut, or weld uncleaned drums.
Send to drum recoverer or metal reclaimer.

SECTION 14: Transport information

14.1 UN number or ID number

ADN : 3082

ADR : 3082

RID : 3082

IMDG : 3082

IATA : 3082

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Alcohol C12-C16 Poly (1-6) Ethoxylate)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Alcohol C12-C16 Poly (1-6) Ethoxylate)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Alcohol C12-C16 Poly (1-6) Ethoxylate)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Alcohol C12-C16 Poly (1-6) Ethoxylate)

IATA : Environmentally hazardous substances, liquid, n.o.s.
(Alcohol C12-C16 Poly (1-6) Ethoxylate)

14.3 Transport hazard class(es)

ADN : 9

ADR : 9

RID : 9

IMDG : 9
IATA : 9

14.4 Packing group

ADN
Packing group : III
Classification Code : M6
Labels : 9 (N1, F)

ADR
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

RID
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

IMDG
Packing group : III
Labels : 9

IATA
Packing group : III
Labels : 9

14.5 Environmental hazards

ADN
Environmentally hazardous : yes

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

14.6 Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

14.7 Maritime transport in bulk according to IMO instruments

Pollution category : Y
Ship type : 2
Product name : ALCOHOL (C12-C16) POLY (1-6) ETHOXYLATES

Additional Information : This product may be transported under nitrogen blanketing.

Nitrogen is an odourless and invisible gas. Exposure to nitrogen enriched atmospheres displaces available oxygen which may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a confined space entry.

Transport in bulk according to Annex II of Marpol and the IBC Code

SECTION 15: Regulatory information

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	E1	ENVIRONMENTAL HAZARDS

Other regulations:
The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

The components of this product are reported in the following inventories:

AIIC	:	Listed
DSL	:	Listed
IECSC	:	Listed
NLP	:	Listed
KECI	:	Listed
NZIoC	:	Listed
PICCS	:	Listed
TSCA	:	Listed
ENCS	:	Listed
TCSI	:	Listed

15.2 Chemical safety assessment
A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Training advice	:	Provide adequate information, instruction and training for operators.
Other information	:	For Industry guidance and tools on REACH please visit the CEFIC website at http://cefic.org/Industry-support. The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB. A vertical bar (|) in the left margin indicates an amendment from the previous version.
Sources of key data used to	:	The quoted data are from, but not limited to, one or more

compile the Safety Data Sheet	sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

Identified Uses according to the Use Descriptor System
Uses - Worker
Title : Formulation & (re)packing of substances and mixtures- Industrial

Uses - Worker
Title : Use as an intermediate- Industrial

Uses - Worker
Title : Use in Cleaning Agents- Industrial

Uses - Worker
Title : Use in Cleaning Agents- Professional

Uses - Worker
Title : Metal working fluids / rolling oils- Industrial

Uses - Worker
Title : Metal working fluids / rolling oils- Professional
Identified Uses according to the Use Descriptor System
Uses - Consumer
Title : Use in Cleaning Agents
- Consumer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

BE / EN

Exposure Scenario - Worker

300000000731	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Formulation & (re)packing of substances and mixtures- Industrial
Use Descriptor	**Sector of Use**: SU3, SU10 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b, PROC 9, PROC 14, PROC 15 **Environmental Release Categories**: ERC2, AISE SPERC 2.1.k.v1
Scope of process	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (eye irritants).	Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
General exposures (closed systems)	No other specific measures identified.
General exposures (open systems)	No other specific measures identified.
Batch processes at elevated temperatures	Formulate in enclosed or ventilated mixing vessels.
Process sampling	No other specific measures identified.
Laboratory activities	No other specific measures identified.
Bulk transfers	No other specific measures identified.

Mixing operations (open systems)	No other specific measures identified.
Drum/batch transfers	No other specific measures identified.
Production or preparation or articles by tabletting, compression, extrusion or pelletisation	No other specific measures identified.
Drum and small package filling	No other specific measures identified.
Equipment cleaning and maintenance	No other specific measures identified.
Storage.	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**
Substance is complex UVCB.	
Readily biodegradable.	
Amounts Used	
Fraction of EU tonnage used in region:	1
Regional use tonnage (tonnes/year):	1,5E+03
Fraction of Regional tonnage used locally:	1
Annual site tonnage (tonnes/year):	1,5E+03
Maximum daily site tonnage (kg/day):	6,82E+03
Frequency and Duration of Use	
Continuous release.	
Emission Days (days/year):	220
Environmental factors not influenced by risk management	
Local freshwater dilution factor:	10
Local marine water dilution factor:	100
Other Operational Conditions affecting Environmental Exposure	
Release fraction to air from process (initial release prior to RMM):	2,50E-03
Release fraction to wastewater from process (initial release prior to RMM):	2,00E-03
Release fraction to soil from process (initial release prior to RMM):	1,00E-04
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used.	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by soil.	
Prevent discharge of undissolved substance to or recover from onsite wastewater.	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%)	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	0
Organisational measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils.	

Sludge should be incinerated, contained or reclaimed.	
Conditions and Measures related to municipal sewage treatment plant	
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	8,54E+03
Assumed domestic sewage treatment plant flow (m3/d)	2.000
Conditions and Measures related to external treatment of waste for disposal	
External treatment and disposal of waste should comply with applicable local and/or regional regulations.	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable local and/or regional regulations.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. Available hazard data do not enable the derivation of a DNEL for eye irritant effects. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
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 on-site technologies, either alone or in combination.
Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).

Exposure Scenario - Worker

300000000730	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as an intermediate- Industrial
Use Descriptor	**Sector of Use**: SU3, SU8, SU9 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 15 **Environmental Release Categories**: ERC6a, ESVOC SpERC 6.1a.v1
Scope of process	Use of substance as an intermediate (not related to Strictly Controlled Conditions). Includes recycling/ recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (eye irritants).	Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
General exposures (closed systems)	No other specific measures identified.
General exposures (open systems)	No other specific measures identified.
Process sampling	No specific measures identified.
Bulk transfers	No other specific measures identified.
Equipment cleaning and maintenance	No other specific measures identified.
Laboratory activities	No other specific measures identified.
Storage.	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**
Substance is complex UVCB.	
Readily biodegradable.	
Amounts Used	
Fraction of EU tonnage used in region:	1
Regional use tonnage (tonnes/year):	3,00E+04
Fraction of Regional tonnage used locally:	1
Annual site tonnage (tonnes/year):	3,00E+04
Maximum daily site tonnage (kg/day):	1,00E+05
Frequency and Duration of Use	
Continuous release.	
Emission Days (days/year):	300
Environmental factors not influenced by risk management	
Local freshwater dilution factor:	10
Local marine water dilution factor:	100
Other Operational Conditions affecting Environmental Exposure	
Release fraction to air from process (initial release prior to RMM):	1,00E-05
Release fraction to wastewater from process (initial release prior to RMM):	1,00E-04
Release fraction to soil from process (initial release prior to RMM):	1,00E-03
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used.	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by soil.	
Prevent discharge of undissolved substance to or recover from onsite wastewater.	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	
Treat air emission to provide a typical removal efficiency of (%)	80
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%)	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	0
Organisational measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.	
Conditions and Measures related to municipal sewage treatment plant	
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	1,71E+05
Assumed domestic sewage treatment plant flow (m3/d)	2.000
Conditions and Measures related to external treatment of waste for disposal	
This substance is consumed during use and no waste of substance is generated.	
Conditions and measures related to external recovery of waste	
This substance is consumed during use and no waste of substance is generated.	

SECTION 3	EXPOSURE ESTIMATION

Section 3.1 - Health

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
Available hazard data do not enable the derivation of a DNEL for eye irritant effects.
Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

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.

Section 4.2 -Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

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 on-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).

Exposure Scenario - Worker

300000000732	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 1, PROC 2, PROC 4, PROC 7, PROC 8a, PROC 8b, PROC 10, PROC 13 **Environmental Release Categories**: ERC4, AISE SPERC 4.1.v1
Scope of process	Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers. Exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand), related equipment cleaning and maintenance.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (eye irritants).	Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
Bulk transfers	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.	No other specific measures identified.
Automated process with (semi) closed systems.Use in contained systems	No other specific measures identified.
Application of cleaning products in closed systems	No other specific measures identified.
Semi Automated process. (e.g.: Semi automatic application of floor care and maintenance prod-	No other specific measures identified.

ucts)	
Degreasing small objects in cleaning station	No other specific measures identified.
Cleaning with low-pressure washers	No other specific measures identified.
Cleaning with high pressure washers	Limit the substance content in the product to 5 %.
ManualSurfacesCleaningno spraying	No other specific measures identified.
ManualSurfacesCleaningSpraying	Avoid carrying out activities involving exposure for more than 1 hour.
Storage.	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**
Substance is complex UVCB.	
Readily biodegradable.	
Amounts Used	
Fraction of EU tonnage used in region:	1
Regional use tonnage (tonnes/year):	3
Fraction of Regional tonnage used locally:	1
Annual site tonnage (tonnes/year):	3
Maximum daily site tonnage (kg/day):	13,6
Frequency and Duration of Use	
Continuous release.	
Emission Days (days/year):	220
Environmental factors not influenced by risk management	
Local freshwater dilution factor:	10
Local marine water dilution factor:	100
Other Operational Conditions affecting Environmental Exposure	
Release fraction to air from process (initial release prior to RMM):	0
Release fraction to wastewater from process (initial release prior to RMM):	1
Release fraction to soil from process (initial release prior to RMM):	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used.	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by soil.	
Prevent discharge of undissolved substance to or recover from onsite wastewater.	
If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%)	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	0
Organisational measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils.	

Sludge should be incinerated, contained or reclaimed.	
Conditions and Measures related to municipal sewage treatment plant	
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	17,1
Assumed domestic sewage treatment plant flow (m3/d)	2.000
Conditions and Measures related to external treatment of waste for disposal	
External treatment and disposal of waste should comply with applicable local and/or regional regulations.	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable local and/or regional regulations.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. Available hazard data do not enable the derivation of a DNEL for eye irritant effects. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
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 on-site technologies, either alone or in combination.
Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).

Exposure Scenario - Worker

300000000733	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 4, PROC 8a, PROC 8b, PROC 10, PROC 11, PROC 13, PROC 19 **Environmental Release Categories**: ERC8a, ERC8d, AISE SPERC 8a.1.a.v1
Scope of process	Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing Scenarios	**Risk Management Measures**
General measures (eye irritants).	Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
Filling/ preparation of equipment from drums or containers.Dedicated facility	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Manual	Avoid carrying out activities involving exposure for more than 4 hours
Automated process with (semi) closed systems.Use in contained systems	No other specific measures identified.
Semi Automated process. (e.g.: Semi automatic application of floor care and maintenance products)	No other specific measures identified.

ManualSurfacesCleaningDipping, immersion and pouring	No other specific measures identified.
Cleaning with low-pressure washersRolling, Brushingno spraying	Limit the substance content in the product to 5 %.
Cleaning with high pressure washersSpraying	Limit the substance content in the product to 5 %.
ManualSurfacesCleaningno spraying	Limit the substance content in the product to 25 %.
ManualSurfacesCleaningSpraying	Avoid carrying out activities involving exposure for more than 1 hour.
Ad hoc manual application via trigger sprays, dipping, etc.Rolling, Brushing	Limit the substance content in the product to 25 %.
Cleaning of medical devices	No other specific measures identified.
Hand mixing with intimate contact.	Avoid carrying out activities involving exposure for more than 1 hour.
Storage.	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**
Substance is complex UVCB.	
Readily biodegradable.	
Amounts Used	
Fraction of EU tonnage used in region:	4,00E-02
Regional use tonnage (tonnes/year):	30
Fraction of Regional tonnage used locally:	8,00E-04
Annual site tonnage (tonnes/year):	2,40E-02
Maximum daily site tonnage (kg/day):	6,58E-02
Frequency and Duration of Use	
Continuous release.	
Emission Days (days/year):	365
Environmental factors not influenced by risk management	
Local freshwater dilution factor:	10
Local marine water dilution factor:	100
Other Operational Conditions affecting Environmental Exposure	
Release fraction to air from wide dispersive use (regional only):	0
Release fraction to wastewater from wide dispersive use:	1
Release fraction to soil from wide dispersive use (regional only):	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used.	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by freshwater sediment.	
Prevent discharge of undissolved substance to or recover from onsite wastewater.	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	

Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%)	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	0
Organisational measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.	
Conditions and Measures related to municipal sewage treatment plant	
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	10,4
Assumed domestic sewage treatment plant flow (m3/d)	2.000
Conditions and Measures related to external treatment of waste for disposal	
External treatment and disposal of waste should comply with applicable local and/or regional regulations.	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable local and/or regional regulations.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. Available hazard data do not enable the derivation of a DNEL for eye irritant effects. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
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 on-site technologies, either alone or in combination.
Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).

Exposure Scenario - Worker

300000000734	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Metal working fluids / rolling oils- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 7, PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 13, PROC 17 **Environmental Release Categories**: ERC4, ESVOC SpERC 4.7a.v1
Scope of process	Covers the use in formulated MWFs/rolling oils including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (eye irritants).	Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
General exposures (closed systems)	No other specific measures identified.
General exposures (open systems)	No other specific measures identified.
Bulk transfers	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.	No other specific measures identified.
Process sampling	No other specific measures identified.

Metal machining operations	No other specific measures identified.
Treatment by dipping and pouring	No other specific measures identified.
Spraying	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.
ManualRolling, Brushing	No other specific measures identified.
ManualRolling, Brushingelevated temperature	Provide extraction ventilation at points where emissions occur.
Automated metal rolling/formingOperation is carried out at elevated temperature (> 20°C above ambient temperature).	Handle substance within a predominantly closed system provided with extract ventilation.
Semi-automated metal rolling/formingOperation is carried out at elevated temperature (> 20°C above ambient temperature).	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.
Equipment cleaning and maintenance	No other specific measures identified.
Storage.	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**
Substance is complex UVCB.	
Readily biodegradable.	
Amounts Used	
Fraction of EU tonnage used in region:	1
Regional use tonnage (tonnes/year):	7,50E+02
Fraction of Regional tonnage used locally:	1,33E-01
Annual site tonnage (tonnes/year):	100
Maximum daily site tonnage (kg/day):	5,00E+03
Frequency and Duration of Use	
Continuous release.	
Emission Days (days/year):	20
Environmental factors not influenced by risk management	
Local freshwater dilution factor:	10
Local marine water dilution factor:	100
Other Operational Conditions affecting Environmental Exposure	
Release fraction to air from process (initial release prior to RMM):	2,00E-02
Release fraction to wastewater from process (initial release prior to RMM):	3,00E-05
Release fraction to soil from process (initial release prior to RMM):	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used.	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	

Risk from environmental exposure is driven by freshwater sediment.	
Prevent discharge of undissolved substance to or recover from onsite wastewater.	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	
Treat air emission to provide a typical removal efficiency of (%)	70
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%)	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	0
Organisational measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.	
Conditions and Measures related to municipal sewage treatment plant	
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	3,43E+05
Assumed domestic sewage treatment plant flow (m3/d)	2.000
Conditions and Measures related to external treatment of waste for disposal	
External treatment and disposal of waste should comply with applicable local and/or regional regulations.	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable local and/or regional regulations.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. Available hazard data do not enable the derivation of a DNEL for eye irritant effects. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Required removal efficiency for wastewater can be achieved using onsite/offsite technolo-

gies, either alone or in combination.
Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.
Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).

Exposure Scenario - Worker

300000000735	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Metal working fluids / rolling oils- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 5, PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 11, PROC 13, PROC 17 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.7c.v1
Scope of process	Covers the use in formulated MWFs including transfer operations, open and contained cutting/machining activities, automated and manual application of corrosion protections, draining and working on contaminated/ reject articles, and disposal of waste oils.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (eye irritants).	Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
General exposures (closed systems)	No other specific measures identified.
Bulk transfers	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Dedicated facility	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Non-dedicated facility	Avoid carrying out activities involving exposure for more than 4 hours

Process sampling	No other specific measures identified.
Metal machining operations	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. , or: Limit the substance content in the product to 25 %.
ManualRolling, Brushing	Provide extraction ventilation at points where emissions occur. , or: Limit the substance content in the product to 25 %.
Spraying	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. If technical measures not practical: Limit the substance content in the product to 25 %. Avoid carrying out activities involving exposure for more than 4 hours , or: Wear a respirator conforming to EN140 with Type A/P2 filter or better.
Treatment by dipping and pouring	No other specific measures identified.
Equipment cleaning and maintenance	Avoid carrying out activities involving exposure for more than 4 hours
Storage.	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**
Substance is complex UVCB.	
Readily biodegradable.	
Amounts Used	
Fraction of EU tonnage used in region:	0,1
Regional use tonnage (tonnes/year):	75
Fraction of Regional tonnage used locally:	5,00E-04
Annual site tonnage (tonnes/year):	3,75E-02
Maximum daily site tonnage (kg/day):	0,103
Frequency and Duration of Use	
Continuous release.	
Emission Days (days/year):	365
Environmental factors not influenced by risk management	
Local freshwater dilution factor:	10
Local marine water dilution factor:	100
Other Operational Conditions affecting Environmental Exposure	
Release fraction to air from wide dispersive use (regional only):	5,00E-03
Release fraction to wastewater from wide dispersive use:	5,00E-02
Release fraction to soil from wide dispersive use (regional only):	5,00E-02
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used.	

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by freshwater sediment.	
Prevent discharge of undissolved substance to or recover from onsite wastewater.	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	
Treat air emission to provide a typical removal efficiency of (%)	0
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%)	
If discharging to domestic sewage treatment plant, no secondary wastewater treatment required.	0
Organisational measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.	
Conditions and Measures related to municipal sewage treatment plant	
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	14,4
Assumed domestic sewage treatment plant flow (m3/d)	2.000
Conditions and Measures related to external treatment of waste for disposal	
External treatment and disposal of waste should comply with applicable local and/or regional regulations.	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable local and/or regional regulations.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. Available hazard data do not enable the derivation of a DNEL for eye irritant effects. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management

measures.
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 on-site technologies, either alone or in combination.
Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).

Exposure Scenario - Consumer

300000001101	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents - Consumer
Use Descriptor	**Sector of Use**: SU21 **Product Categories**: PC3, PC31, PC35 **Environmental Release Categories**: ERC8a, ERC8d, AISE SPERC 4.1.v1
Scope of process	Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**	
Section 2.1	**Control of Consumer Exposure**	
Product Characteristics		
Physical form of product	Liquid, vapour pressure < 10 Pa at STP	
Concentration of the Substance in Mixture/Article	Unless stated otherwise.	
	Covers concentration up to (%): 100 %	
Amounts Used		
Unless stated otherwise.		
for each use event, covers amount up to (g):		550
covers skin contact area (cm2):		857,50
Frequency and Duration of Use		
Unless stated otherwise.		
covers use up to (times/day of use):		4
Exposure (hours/event):		8
Other Operational Conditions affecting Exposure		
Unless stated otherwise. Covers use at ambient temperatures. Covers use in room size of 20m3 Covers use under typical household ventilation.		
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**	
Air care products Air care, instant action (aerosol sprays).	Covers concentrations up to 25 %	
	covers use up to 365 day/year	
	covers use up to 4 times/day of use	
	For each use event, covers amount up to 8,4 g	
	Covers exposure up to 0,25 hours/event	
Air care products Air care, continuous action (solid and	Covers concentrations up to 100 %	

liquid).	
	covers use up to 365 day/year
	covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 35,70 cm2
	For each use event, covers amount up to 50 g
	Covers exposure up to 8,00 hours/event
Polishes and wax blends Polishes, wax / cream (floor, furniture, shoes).	Covers concentrations up to 45 %
	covers use up to 365 day/year
	covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 550 g
	Covers exposure up to 4 hours/event
Polishes and wax blends Polishes, spray (furniture, shoes).	Covers concentrations up to 10 %
	covers use up to 156 day/year
	covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 60 g
	Covers exposure up to 4 hours/event
Washing and cleaning products (including solvent based products) Laundry and dish washing products.	Covers concentrations up to 100 %
	covers use up to 365 day/year
	covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 50 g
	Covers exposure up to 1 hours/event
Washing and cleaning products (including solvent based products) Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners).	Covers concentrations up to 100 %
	covers use up to 128 day/year
	covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 250 g
	Covers exposure up to 0,33 hours/event
Washing and cleaning products (including solvent based products) Cleaners, trigger sprays (all purpose cleaners,sanitary products, glass cleaners).	Covers concentrations up to 10 %
	covers use up to 40 day/year

	covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,00 cm2
	For each use event, covers amount up to 60 g
	Covers exposure up to 4 hours/event

Section 2.2	**Control of Environmental Exposure**
Substance is complex UVCB.	
Readily biodegradable.	
Amounts Used	
Fraction of EU tonnage used in region:	4,00E-02
Regional use tonnage (tonnes/year):	30
Fraction of Regional tonnage used locally:	8,00E-04
Annual site tonnage (tonnes/year):	2,40E-02
Maximum daily site tonnage (kg/day):	6,58E-02
Frequency and Duration of Use	
Continuous release.	
Emission Days (days/year):	365
Environmental factors not influenced by risk management	
Local freshwater dilution factor:	10
Local marine water dilution factor:	100
Other Operational Conditions affecting Environmental Exposure	
Release fraction to air from wide dispersive use (regional only):	0
Release fraction to wastewater from wide dispersive use:	1
Release fraction to soil from wide dispersive use (regional only):	0
Conditions and Measures related to municipal sewage treatment plant	
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	10,4
Assumed domestic sewage treatment plant flow (m3/d)	2.000
Conditions and Measures related to external treatment of waste for disposal	
External treatment and disposal of waste should comply with applicable local and/or regional regulations.	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable local and/or regional regulations.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.	

Section 3.2 -Environment

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.

Section 4.2 -Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).