

# SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended  
by UK REACH Regulations SI 2019/758

**schülke** 

## **terralin® protect**     *No Change Service!*

Version  
06.07

Revision Date:  
13.11.2023

Date of last issue: 19.09.2022

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

#### **1.1 Product identifier**

Trade name : terralin® protect  
Unique Formula Identifier (UFI) : Q020-T0PQ-S007-1E7K

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

Use of the Sub-stance/Mixture : Disinfectants and general biocidal products  
  
Recommended restrictions on use : For professional users only.

#### **1.3 Details of the supplier of the safety data sheet**

Producer : Schülke & Mayr GmbH  
Robert-Koch-Str. 2  
  
22851 Norderstedt  
Germany  
Telephone: +49 (0)40/ 52100-0  
Telefax: +49 (0)40/ 52100318  
mail@schuelke.com  
www.schuelke.com

Supplier : Schülke & Mayr UK Ltd.  
Cygnet House  
1, Jenkin Road  
  
Sheffield S9 1AT  
United Kingdom  
Telephone: +44 114 254 35 00  
Telefax: +44 114 254 35 01  
mail.uk@schulke.com

E-mail address of person responsible for the SDS/Contact person : Application Specialists  
+49 (0)40/ 521 00 666  
AD@schuelke.com

#### **1.4 Emergency telephone number**

Emergency telephone number : Carechem 24 International:+44 1235 239670

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### SECTION 2: Hazards identification


#### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin corrosion, Sub-category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
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) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

Hazard pictograms : 

Signal word : Danger

Hazard statements : H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

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2-phenoxyethanol  
Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, branched  
Betaines, C12-14-alkyldimethyl

### **Additional Labelling**

The product is classified in accordance with Annex I (2.6.4.5) to Regulation  
(EC) 1272/2008.

### **2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## **SECTION 3: Composition/information on ingredients**

### **3.2 Mixtures**

Chemical nature : Solution of the following substances with harmless additives.

#### **Hazardous components**

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1 270-325-2 - - - 01-2119965180-41-XXXX	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1	>= 20 - < 25
2-phenoxyethanol	122-99-6 204-589-7 603-098-00-9 - - -	Acute Tox. 4; H302 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system)	>= 10 - < 20
Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, branched	69011-36-5 500-241-6 - - - - - -	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Chronic 3; H412  specific concentration limit Eye Dam. 1; H318 > 10 % Eye Irrit. 2; H319 > 1 - < 10 %	>= 3 - < 10

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propan-2-ol	67-63-0 200-661-7 603-117-00-0 01-2119457558-25-XXXX	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 (Central nervous system)	>= 1 - < 10
Betaines, C12-14-alkyldimethyl	66455-29-6 266-368-1 - - - 01-2119529251-48-XXXX	Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 1 - < 2.5
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	102-60-3 203-041-4 - - - 01-2119552434-41-XXXX	Eye Irrit. 2; H319	>= 1 - < 10
Glycine, aminoalkyl derivs.	- - - 941-419-7 - - - 01-2120050368-56-XXXX	Acute Tox. 4; H302 Acute Tox. 3; H311 Skin Corr. 1C; H314 Eye Dam. 1; H318 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1	>= 0.25 - < 1

For explanation of abbreviations see section 16.

### Other information

CAS 68424-85-1 CORRESPONDS TO  
REACH: EC 939-253-5  
BPR: EC 269-919-4/ CAS 68391-01-5

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General advice : Take off immediately all contaminated clothing and wash it before reuse.
- If inhaled : Move to fresh air.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.  
Consult a physician.

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- In case of eye contact : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Obtain medical attention.
- If swallowed : Do NOT induce vomiting.  
Rinse mouth with water.  
Give small amounts of water to drink.  
Obtain medical attention.

### **4.2 Most important symptoms and effects, both acute and delayed**

- Symptoms : Treat symptomatically.
- Risks : Harmful if swallowed.  
Causes serious eye damage.  
Causes severe burns.

### **4.3 Indication of any immediate medical attention and special treatment needed**

- Treatment : For specialist advice physicians should contact the Poisons Information Service.
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## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

- Suitable extinguishing media : Dry powder  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Water spray jet
- Unsuitable extinguishing media : Do NOT use water jet.

### **5.2 Special hazards arising from the substance or mixture**

- Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : No hazardous combustion products are known

### **5.3 Advice for firefighters**

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
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## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

- Personal precautions : Increased risk of slipping in the presence of leaked / spilled product.
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### 6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

### 6.4 Reference to other sections

see Section 8 + 13

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8).  
Wear personal protective equipment.  
Avoid formation of aerosol.  
Ensure adequate ventilation.

Advice on protection against fire and explosion : No special protective measures against fire required.

Hygiene measures : Keep away from food and drink.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store at room temperature in the original container.

Further information on storage conditions : Keep away from heat. Keep away from direct sunlight. Keep container tightly closed. Recommended storage temperature: 5 - 25°C

Advice on common storage : Do not store together with explosives, oxidizing agents, organic peroxides and infectious products.

### 7.3 Specific end use(s)

Specific use(s) : none

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
propan-2-ol	67-63-0	TWA	400 ppm 999 mg/m <sup>3</sup>	GB EH40
		STEL	500 ppm 1,250 mg/m <sup>3</sup>	GB EH40

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### Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Workers	Skin contact	Long-term systemic effects	5.7 mg/kg
	Workers	Inhalation	Long-term systemic effects	3.96 mg/m <sup>3</sup>
Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, branched	Workers	Inhalation	Long-term systemic effects	294 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	888 mg/kg
propan-2-ol	Workers	Inhalation	Long-term systemic effects	500 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	4.2 mg/kg
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	Workers	Inhalation	Long-term systemic effects	29.4 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	100 mg/kg bw/day
Glycine, aminoalkyl derivs.	Workers	Inhalation	Long-term systemic effects	0.19 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	100 mg/kg bw/day

### Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Fresh water	0.0009 mg/l
	Marine water	0.00009 mg/l
	Fresh water sediment	12.27 mg/kg
	Marine sediment	13.09 mg/kg
	Soil	7 mg/kg
	Effects on waste water treatment plants	0.4 mg/l
	Intermittent use/release	0.00016 mg/l
Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, branched	Fresh water	0.074 mg/l
	Marine water	0.0074 mg/l
	Intermittent use/release	0.015 mg/l
	Sewage treatment plant	1.4 mg/l
	Soil	0.1 mg/kg
	Fresh water sediment	0.604 mg/kg
	Marine sediment	0.0604 mg/kg
propan-2-ol	Fresh water	140.9 mg/l
	Marine water	140.9 mg/l
	Fresh water sediment	552 mg/kg
	Marine sediment	552 mg/kg
	Soil	28 mg/kg

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	Intermittent use/release	140.9 mg/l	
	Effects on waste water treatment plants	2251 mg/l	
	Oral	160 mg/kg food	
1,1',1'',1'''- ethylenedinitrilotetrapropan-2-ol	Fresh water	0.085 mg/l	
	Marine water	0.0085 mg/l	
	Intermittent use/release	1.51 mg/l	
	Sewage treatment plant	70 mg/l	
	Fresh water sediment	0.193 mg/kg	
	Marine sediment	0.0193 mg/kg	
	Soil	0.0183 mg/kg	
	Glycine, aminoalkyl derivs.	Fresh water	0.00023 mg/l
		Marine water	0.000023 mg/l
		Sewage treatment plant	0.22 mg/l
Fresh water sediment		2.69 mg/kg dry weight (d.w.)	
	Marine sediment	0.269 mg/kg dry weight (d.w.)	
	Soil	5.7 mg/kg dry weight (d.w.)	

## 8.2 Exposure controls

### Engineering measures

Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protective equipment

Eye/face protection : Safety glasses with side-shields conforming to EN166

Hand protection

Directive : The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Remarks : Splash protection: disposable nitrile rubber gloves e.g. Dermatril (layer thickness: 0.11 mm) made by KCL or gloves from other manufacturers offering the same protection. Prolonged contact: Nitrile rubber gloves e.g. Camatril (>480 Min., layer thickness: 0,40 mm) or butyl rubber gloves e.g. Butoject (>480 Min., layer thickness: 0,70 mm) made by KCL or gloves from other manufacturers offering the same protection.

Skin and body protection : Work uniform or laboratory coat.

Respiratory protection : Not required; except in case of aerosol formation.

Respiratory protection complying with EN 141.

Recommended Filter type:

A

Protective measures : Avoid contact with skin and eyes.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : green



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Odour	:	pleasant
Odour Threshold	:	not determined
pH	:	8.6 (20 °C) Concentration: 100 %
Melting point/freezing point	:	< -5 °C
Decomposition temperature	:	Not applicable
Boiling point/boiling range	:	ca. 90 °C
Flash point	:	48 °C Method: DIN 51755 Part 1
Evaporation rate	:	No data available
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	ca. 1.01 g/cm <sup>3</sup> (20 °C)
Solubility(ies) Water solubility	:	completely soluble (20 °C)
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	Not applicable
Viscosity Viscosity, dynamic	:	ca. 21 mPa*s (20 °C) Method: ISO 3219
Viscosity, kinematic	:	not determined
Explosive properties	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

### 9.2 Other information

Flammability (liquids)	:	Does not sustain combustion.
Metal corrosion rate	:	< 6.25 mm/a Not corrosive to metals Aluminium and Mild steel

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

#### 10.2 Chemical stability

The product is chemically stable.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions : None reasonably foreseeable.

#### 10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature and direct sunlight.

#### 10.5 Incompatible materials

Materials to avoid : Incompatible with strong acids and oxidizing agents.

#### 10.6 Hazardous decomposition products

None reasonably foreseeable.

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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

Harmful if swallowed.

##### Product:

Acute oral toxicity : Acute toxicity estimate: 1,405 mg/kg  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

##### Components:

##### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

Acute oral toxicity : LD50 (Rat): > 300 - 2,000 mg/kg  
Method: OECD Test Guideline 401  
Assessment: Harmful if swallowed.

Acute inhalation toxicity : LC50 (Rat): > 2 mg/l  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): 1,100 mg/kg  
Assessment: Harmful in contact with skin.

##### **2-phenoxyethanol:**

Acute oral toxicity : LD50 (Rat): 1,394 mg/kg  
Method: OECD Test Guideline 401

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Acute inhalation toxicity : (Rat): Exposure time: 8 h  
Test atmosphere: Aerosol  
Remarks: An LC50/ inhalation could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Acute dermal toxicity : LD50 (Rat): 14,391 mg/kg

### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega-hydroxy-, branched:**

Acute oral toxicity : LD50 (Rat): > 300 - 2,000 mg/kg

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50: > 5,000 mg/kg  
Method: literature value

### **propan-2-ol:**

Acute oral toxicity : LD50 (Rat): 5,840 mg/kg

Acute inhalation toxicity : LC50 (Rat): 39 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 13,900 mg/kg  
Method: OECD Test Guideline 402

### **Betaines, C12-14-alkyldimethyl:**

Acute oral toxicity : LD50 (Mouse): 2,640 mg/kg

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

### **1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol:**

Acute oral toxicity : LD50 (Rat): 2,890 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402

### **Glycine, aminoalkyl derivs.:**

Acute oral toxicity : LD50 (Rat, male and female): > 660 mg/kg

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rat): > 400 mg/kg

### **Skin corrosion/irritation**

Causes severe burns.

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### **Product:**

Remarks : Causes severe skin burns and eye damage.

### **Components:**

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

Species : Rabbit  
Result : Corrosive after 3 minutes to 1 hour of exposure  
GLP : no

#### **2-phenoxyethanol:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

#### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, branched:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

#### **propan-2-ol:**

Result : No skin irritation

#### **Betaines, C12-14-alkyldimethyl:**

Method : OECD Test Guideline 404  
Result : Corrosive after 3 minutes to 1 hour of exposure

#### **1,1',1",1'''-ethylenedinitrilotetrapropan-2-ol:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

#### **Glycine, aminoalkyl derivs.:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Corrosive after 1 to 4 hours of exposure

### **Serious eye damage/eye irritation**

Causes serious eye damage.

### **Product:**

Remarks : Causes serious eye damage.

### **Components:**

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

Result : Irreversible effects on the eye

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### **2-phenoxyethanol:**

|||Result : Eye irritation

### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega.-hydroxy-, branched:**

|||Species : Rabbit  
|||Method : Draize Test  
|||Result : Irreversible effects on the eye

### **propan-2-ol:**

|||Result : Eye irritation

### **Betaines, C12-14-alkyldimethyl:**

|||Species : Rabbit  
|||Method : OECD Test Guideline 405  
|||Result : Irreversible effects on the eye

### **1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol:**

|||Species : Rabbit  
|||Method : OECD Test Guideline 405  
|||Result : Eye irritation

### **Glycine, aminoalkyl derivs.:**

|||Species : Rabbit  
|||Result : Irreversible effects on the eye

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

Not classified based on available information.

#### **Respiratory sensitisation**

Not classified based on available information.

### **Components:**

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

|||Test Type : Buehler Test  
|||Species : Guinea pig  
|||Method : OECD Test Guideline 406  
|||Result : Did not cause sensitisation on laboratory animals.  
|||GLP : yes

### **2-phenoxyethanol:**

|||Test Type : Maximisation Test  
|||Species : Guinea pig  
|||Method : OECD Test Guideline 406  
|||Result : Did not cause sensitisation on laboratory animals.

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### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega-hydroxy-, branched:**

Test Type : Maximisation Test  
Species : Guinea pig  
Result : Did not cause sensitisation on laboratory animals.

### **propan-2-ol:**

Test Type : Buehler Test  
Species : Guinea pig  
Result : Did not cause sensitisation on laboratory animals.

### **Betaines, C12-14-alkyldimethyl:**

Test Type : Maximisation Test  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Not a skin sensitizer.

### **1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol:**

Test Type : Maximisation Test  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Did not cause sensitisation on laboratory animals.

### **Glycine, aminoalkyl derivs.:**

Test Type : Maximisation Test  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Not a skin sensitizer.

### **Germ cell mutagenicity**

Not classified based on available information.

### **Components:**

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: Not mutagenic in Ames Test

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse (male and female)  
Application Route: Oral  
Method: OECD Test Guideline 474  
GLP: yes

Germ cell mutagenicity- Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

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Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Result: negative

Germ cell mutagenicity- Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, branched:**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Result: negative

### **propan-2-ol:**

Genotoxicity in vitro : Test Type: Ames test  
Method: Mutagenicity (Escherichia coli - reverse mutation assay)  
Result: Non mutagenic

Genotoxicity in vivo : Species: Mouse  
Method: Mutagenicity (micronucleus test)  
Result: Non mutagenic

Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test

### **Betaines, C12-14-alkyldimethyl:**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

### **1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol:**

Genotoxicity in vitro : Result: Not mutagenic in Ames Test

### **Glycine, aminoalkyl derivs.:**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative

Genotoxicity in vivo : Remarks: No data available

Germ cell mutagenicity- Assessment : No data available

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### **Carcinogenicity**

Not classified based on available information.

### **Components:**

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

|| Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

#### **2-phenoxyethanol:**

|| Remarks : This information is not available.

#### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega.-hydroxy-, branched:**

|| Remarks : This information is not available.

#### **propan-2-ol:**

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

#### **1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol:**

|| Remarks : This information is not available.

#### **Glycine, aminoalkyl derivs.:**

|| Carcinogenicity - Assessment : No data available

### **Reproductive toxicity**

Not classified based on available information.

### **Components:**

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

|| Effects on fertility : Test Type: Two-generation study  
Species: Rat, male and female  
Application Route: Oral  
General Toxicity - Parent: NOAEL: 51 - 102 mg/kg body weight  
General Toxicity F1: NOAEL: 41 - 83 mg/kg body weight  
Fertility: NOAEL: 139 - 198 mg/kg body weight  
Method: OECD Test Guideline 416  
Result: Animal testing did not show any effects on fertility.  
GLP: yes

|| Effects on foetal development : Species: Rat  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 8.1 mg/kg body weight  
Developmental Toxicity: NOAEL: 81 mg/kg body weight  
Method: OECD Test Guideline 414  
GLP: yes  
Remarks: Animal testing did not show any effects on foetal development.

#### **2-phenoxyethanol:**



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Effects on foetal development : Test Type: Pre-natal  
Species: Rat  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 300 mg/kg bw/day  
Method: OPPTS 870.3700

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.

### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega-hydroxy-, branched:**

Effects on fertility : Remarks: Animal testing did not show any effects on fertility.

Effects on foetal development : Remarks: No effects on fertility and early embryonic development were detected.

### **propan-2-ol:**

Effects on foetal development : Species: Rat  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 400 mg/kg body weight

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.

### **1,1',1",1'''-ethylenedinitrilotetrapropan-2-ol:**

### **Glycine, aminoalkyl derivs.:**

Reproductive toxicity - Assessment : No data available

### **STOT - single exposure**

Not classified based on available information.

### **Components:**

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

Remarks : No data available

### **2-phenoxyethanol:**

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega-hydroxy-, branched:**

Remarks : No data available

### **propan-2-ol:**

Assessment : May cause drowsiness or dizziness.

### **1,1',1",1'''-ethylenedinitrilotetrapropan-2-ol:**

Remarks : No data available

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### **STOT - repeated exposure**

Not classified based on available information.

### **Components:**

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

||Remarks : No data available

#### **2-phenoxyethanol:**

||Remarks : No data available

#### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega-hydroxy-, branched:**

||Remarks : No data available

#### **propan-2-ol:**

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

#### **1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol:**

||Remarks : No data available

#### **Glycine, aminoalkyl derivs.:**

||Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

### **Repeated dose toxicity**

### **Components:**

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

||Species : Rat, male  
||NOAEL : 31 mg/kg  
||Application Route : Oral  
||Exposure time : 90-day  
||Method : OECD Test Guideline 408  
||GLP : yes

||Species : Rat  
||NOAEL : 214 mg/kg  
||Application Route : Oral  
||Exposure time : 14-days  
||Method : OECD Test Guideline 407

#### **2-phenoxyethanol:**

||Species : Rat, male and female  
||NOAEL : 369 mg/kg  
||Application Route : Oral  
||Method : OECD Test Guideline 408

#### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega-hydroxy-, branched:**

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Species : Rat  
NOAEL : 50 mg/kg  
Application Route : Oral  
Exposure time : 2 yr  
Target Organs : Heart, Liver, Kidney

### **propan-2-ol:**

Remarks : No data available

### **Betaines, C12-14-alkyldimethyl:**

Species : Rat  
NOAEL : 50 mg/kg

### **Glycine, aminoalkyl derivs.:**

Species : Mouse  
NOAEL : 2 mg/kg  
Application Route : Oral  
Exposure time : 78 Weeks

### **Aspiration toxicity**

Not classified based on available information.

### **Further information**

#### **Product:**

Remarks : No data is available on the product itself.

---

## **SECTION 12: Ecological information**

### **12.1 Toxicity**

#### **Product:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.18 mg/l  
Exposure time: 48 h  
Analytical monitoring: yes  
Method: OECD Test Guideline 202  
GLP: yes

#### **Components:**

##### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.85 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 0.015 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : IC50 : 0.03 mg/l  
Exposure time: 72 h

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M-Factor (Acute aquatic toxicity)	:	10
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.032 mg/l Exposure time: 34 d Species: Pimephales promelas (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0.0042 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
M-Factor (Chronic aquatic toxicity)	:	1

### **2-phenoxyethanol:**

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 337 - 352 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna): > 500 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (green algae): > 500 mg/l Exposure time: 72 h Method: DIN 38412
Toxicity to microorganisms	:	EC10 (Pseudomonas putida): > 100 mg/l Exposure time: 17 h Method: DIN 38 412 Part 8
Toxicity to fish (Chronic toxicity)	:	NOEC: 23 mg/l Exposure time: 34 d Species: Pimephales promelas (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 9.43 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211
Plant toxicity	:	Remarks: No data available

### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega-hydroxy-, branched:**

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 2.5 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1.5 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 2.5 mg/l Exposure time: 72 h
	:	EC10 (Desmodesmus subspicatus (green algae)): 0.6 mg/l

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Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOEC: 1.73 mg/l  
Method: QSAR

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1.36 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: QSAR

### **propan-2-ol:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 9,640 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 10,000 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 72 h  
Test Type: static test

EC50 (green algae): 1,800 mg/l  
Exposure time: 7 d

### **Betaines, C12-14-alkyldimethyl:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 4.4 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 7.76 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): 0.38 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 2.99 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

### **1,1',1",1'''-ethylenedinitrilotetrapropan-2-ol:**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l  
Exposure time: 96 h  
Method: DIN 38412

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Method: Tested according to Directive 92/69/EEC.

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Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 72 h  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 1 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

### **Glycine, aminoalkyl derivs.:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.207 µg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0333 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): 0.00955 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC: >= 0.0523 mg/l  
Exposure time: 28 d  
Species: Oncorhynchus mykiss (rainbow trout)  
Method: OECD Test Guideline 215

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : 0.0024 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

## **12.2 Persistence and degradability**

### **Product:**

Biodegradability : Result: Readily biodegradable.  
Method: OECD 301D / EEC 84/449 C6

### **Components:**

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

Biodegradability : Concentration: 5 mg/l  
Result: Readily biodegradable.  
Biodegradation: 95.5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

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||

### **2-phenoxyethanol:**

|| Biodegradability : Inoculum: activated sludge  
Result: Readily biodegradable.  
Biodegradation: > 70 %  
Exposure time: 15 d  
Method: OECD Test Guideline 301A  
Remarks: According to the results of tests of biodegradability  
this product is considered as being readily biodegradable.

### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega.-hydroxy-, branched:**

|| Biodegradability : Test Type: aerobic  
Inoculum: activated sludge  
Result: Readily biodegradable.  
Biodegradation: > 60 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

### **propan-2-ol:**

|| Biodegradability : Result: Readily biodegradable.

### **Betaines, C12-14-alkyldimethyl:**

|| Biodegradability : Result: Readily biodegradable.

### **1,1',1",1'''-ethylenedinitrilotetrapropan-2-ol:**

|| Biodegradability : Test Type: aerobic  
Result: Not readily biodegradable.  
Biodegradation: 9 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F

## 12.3 Bioaccumulative potential

### Components:

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

|| Bioaccumulation : Exposure time: 35 d  
Concentration: 0.076 mg/l  
Bioconcentration factor (BCF): 79  
GLP: yes  
Remarks: Does not bioaccumulate.

|| Partition coefficient: n-  
octanol/water : log Pow: 2.75 (20 °C)

#### **2-phenoxyethanol:**

|| Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water,  
accumulation in organisms is not expected.  
No bioaccumulation is to be expected (log Pow <= 4).

|| Partition coefficient: n-  
octanol/water : log Pow: 1.2 (23 °C)

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||| octanol/water

pH: 7

Method: OECD Test Guideline 107

### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega.-hydroxy-, branched:**

||| Bioaccumulation : Remarks: None reasonably foreseeable.

||| Partition coefficient: n-  
octanol/water : Remarks: Not applicable

### **propan-2-ol:**

||| Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).

||| Partition coefficient: n-  
octanol/water : log Pow: 0.05 (20 °C)  
Method: OECD Test Guideline 107

### **1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol:**

||| Bioaccumulation : Remarks: No data available

### **Glycine, aminoalkyl derivs.:**

||| Bioaccumulation : Remarks: No data available

## 12.4 Mobility in soil

### Components:

#### **Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

||| Mobility : Remarks: No data available

#### **2-phenoxyethanol:**

||| Mobility : Remarks: Substance does not evaporate from water surface into the atmosphere.

#### **Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-omega.-hydroxy-, branched:**

||| Mobility : Remarks: No data available

#### **propan-2-ol:**

||| Mobility : Remarks: Mobile in soils

#### **1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol:**

||| Mobility : Remarks: No data available

## 12.5 Results of PBT and vPvB assessment

### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



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### Components:

#### **2-phenoxyethanol:**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

### **12.6 Other adverse effects**

#### Product:

Endocrine disrupting potential : 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.

Additional ecological information : No data is available on the product itself.

## **SECTION 13: Disposal considerations**

### **13.1 Waste treatment methods**

Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

## **SECTION 14: Transport information**

### **14.1 UN number**

ADR : UN 1903  
IMDG : UN 1903  
IATA : UN 1903

### **14.2 UN proper shipping name**

ADR : DISINFECTANT, LIQUID, CORROSIVE, N.O.S.  
(Alkyl(C12-16)dimethylbenzylammoniumchloride)

IMDG : DISINFECTANT, LIQUID, CORROSIVE, N.O.S.  
(Alkyl(C12-16)dimethylbenzylammoniumchloride)

IATA : Disinfectant, liquid, corrosive, n.o.s.  
(Alkyl(C12-16)dimethylbenzylammoniumchloride)

### **14.3 Transport hazard class(es)**

	Class	Subsidiary risks
ADR	: 8	

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**IMDG** : 8

**IATA** : 8

### 14.4 Packing group

#### **ADR**

Packing group : III  
Classification Code : C9  
Hazard Identification Number : 80  
Labels : 8  
Tunnel restriction code : (E)

#### **IMDG**

Packing group : III  
Labels : 8  
EmS Code : F-A, S-B

#### **IATA (Cargo)**

Packing instruction (cargo aircraft) : 856  
Packing instruction (LQ) : Y841  
Packing group : III  
Labels : Corrosive

#### **IATA (Passenger)**

Packing instruction (passenger aircraft) : 852  
Packing instruction (LQ) : Y841  
Packing group : III  
Labels : Corrosive

### 14.5 Environmental hazards

#### **ADR**

Environmentally hazardous : yes

#### **IMDG**

Marine pollutant : yes

### 14.6 Special precautions for user

Remarks : Not classified as supporting combustion according to the transport regulations.

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)

: Conditions of restriction for the fol-

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lowing entries should be considered:  
Number on list 3

UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation : Not applicable  
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain) : Not applicable  
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable  
UK REACH List of substances subject to authorisation (Annex XIV) : Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)  
Volatile organic compounds (VOC) content: 5.45 %

according to Detergents Regulation EC 648/2004 : 15 - < 30%: Cationic surfactants  
5 - < 15%: Non-ionic surfactants  
Other constituents: Perfumes

### **Other regulations:**

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

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

TCSI : Not in compliance with the inventory  
TSCA : Product contains substance(s) not listed on TSCA inventory.  
AIIIC : Not in compliance with the inventory  
DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.  
Betaines, C12-14-alkyldimethyl  
Glycine, aminoalkyl derivs.  
reaction mass of cis-and trans-cyclohexadec-8-en-1-one  
ENCS : Not in compliance with the inventory  
ISHL : Not in compliance with the inventory  
KECI : Not in compliance with the inventory  
PICCS : Not in compliance with the inventory  
IECSC : Not in compliance with the inventory  
NZIoC : Not in compliance with the inventory  
TECI : Not in compliance with the inventory

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### 15.2 Chemical safety assessment

#### SECTION 16: Other information **Full text of H-Statements**

H225	:	Highly flammable liquid and vapour.
H302	:	Harmful if swallowed.
H311	:	Toxic in contact with skin.
H312	:	Harmful in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

#### **Full text of other abbreviations**

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Skin Corr.	:	Skin corrosion
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

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)

# SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

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tative) 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; TECL - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

### Further information

#### Classification of the mixture:

Acute Tox. 4	H302
Skin Corr. 1B	H314
Eye Dam. 1	H318
Aquatic Acute 1	H400
Aquatic Chronic 2	H411

#### Classification procedure:

Calculation method
Calculation method
Calculation method
Based on product data or assessment
Calculation method

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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