

terralin® protect **No Change Service!**Version
06.02Revision Date:
12.06.2019

Date of last issue: 04.04.2018

Date of first issue: 23.01.2008

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name : terralin® protect

1.2 Relevant identified uses of the substance or mixture and uses advised againstUse of the Sub-
stance/Mixture : Disinfectants and general biocidal productsRecommended restrictions
on use : For professional users only.**1.3 Details of the supplier of the safety data sheet**

Manufacturer/ Supplier : Schülke & Mayr GmbH
Robert-Koch-Str. 2

22851 Norderstedt
Germany
Telephone: +49 (0)40/ 52100-0
mail@schuelke.com

Supplier : Schülke & Mayr UK Ltd.
Cygnet House
1, Jenkin Road, Meadowhall

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 Department
+49 (0)40/ 521 00 666
AD@schuelke.com
(Schülke & Mayr UK Ltd.: +44-1142543500)

1.4 Emergency telephone numberEmergency telephone num-
ber : UK Poisons Emergency number: 0870 600 6266**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Acute toxicity, Category 4 H302: Harmful if swallowed.

Skin corrosion, Category 1B H314: Causes severe skin burns and eye damage.

Serious eye damage, Category 1 H318: Causes serious eye damage.

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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

:

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

:

P273 Avoid release to the environment.
 P280 Wear protective gloves (e.g. butyl rubber) /protective clothing/eye protection/face protection.
 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.
 P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

68424-85-1

Alkyl (C12-16) dimethylbenzyl ammonium chloride

Special labelling of certain mixtures

:

Labelling according to Regulation (EC) No. 648/2004: (5 - 15 % non-ionic surfactants, perfumes)

Further information

:

The product is classified in accordance with Annex I (2.6.4.5) to Regulation (EC) 1272/2008.
 Use biocides safely. Always read the label and product information before use.

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.

No special risks known.

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SECTION 3: Composition/information on ingredients**3.2 Mixtures**

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

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1 270-325-2 - - - 01-2119965180-41-XXXX	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Aquatic Acute 1; H400; M = 10 Aquatic Chronic 1; H410; M = 1	22
2-phenoxyethanol	122-99-6 204-589-7 603-098-00-9 01-2119488943-21-XXXX	Acute Tox. 4; H302 Eye Irrit. 2; H319	10 - 20
Tridecylpolyethylenglycolether	69011-36-5 Polymer - - - - - -	Eye Dam. 1; H318 Aquatic Chronic 3; H412	5 - 15
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	3 - 8
Tetrahydroxypropylethylendiamin	102-60-3 - - - - - - 01-2119552434-41-XXXX	Eye Irrit. 2; H319	< 5
Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid	- - - - - - - - - 01-2120050368-56-XXXX	Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT RE 1; H373 Aquatic Acute 1; H400; M = 10 Aquatic Chronic 1; H410; M = 1	0.9

For explanation of abbreviations see section 16.

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

- General advice : Take off all contaminated clothing immediately.
- If inhaled : Move the victim to fresh air and keep him calm.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
If symptoms persist, call a physician.
- 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.

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 (CO₂)
Water spray jet
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

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 : Carbon dioxide (CO₂)
Carbon monoxide
Nitrogen oxides (NO_x)

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5.3 Advice for firefighters

Special protective equipment : In the event of fire, wear self-contained breathing apparatus for firefighters

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.

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.

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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	Permissible exposure limit	400 ppm 999 mg/m ³	United Kingdom. Workplace Exposure Limits (EH40/2005): Table 1:
		Short term exposure limit	500 ppm 1,250 mg/m ³	HSE

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Alkyl (C12-16) dimethylbenzyl ammonium chloride	Workers	Skin contact	Long-term systemic effects	5.7 mg/kg
	Workers	Inhalation	Long-term systemic effects	3.96 mg/m ³
2-phenoxyethanol	Workers	Inhalation	Long-term systemic effects, Long-term local effects	8.07 mg/m ³
	Workers	Skin contact	Long-term systemic effects	34.72 mg/kg
	Consumers	Inhalation	Long-term exposure, Short-term exposure, Local effects	2.5 mg/m ³
	Consumers	Skin contact	Long-term local effects	20.83 mg/kg
Propan-2-ol	Consumers	Ingestion	Short-term exposure, Long-term exposure, Systemic effects	17.43 mg/kg
	Workers	Skin contact	Long-term systemic effects	888 mg/kg
	Workers	Inhalation	Long-term systemic effects	500 mg/m ³
Tetrahydroxypropylethyldiamin	Workers	Skin contact	Long-term systemic effects	4.2 mg/kg
	Workers	Inhalation	Long-term systemic effects	29.4 mg/kg

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

Substance name	Environmental Compartment	Value
Alkyl (C12-16) dimethylbenzyl	Fresh water	0.0009 mg/l

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ammonium chloride	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
2-phenoxyethanol	Fresh water	0.943 mg/l
	Marine water	0.0943 mg/l
	Fresh water sediment	7.2366 mg/kg
	Marine sediment	0.7237 mg/kg
	Soil	1.26 mg/kg
	Intermittent use/release	3.44 mg/l
Propan-2-ol	Sewage treatment plant	24.8 mg/l
	Fresh water	140.9 mg/l
	Marine water	140.9 mg/l
Propan-2-ol	Fresh water sediment	552 mg/kg
	Marine sediment	552 mg/kg
	Soil	28 mg/kg
	Intermittent use/release	140.9 mg/l
	Effects on waste water treatment plants	2251 mg/l
	Oral	160 mg/kg food
Tetrahydroxypropylethylendiamin	Fresh water	0.085 mg/l
	Marine water	0.0085 mg/l
	Fresh water sediment	0.193 mg/kg
	Marine sediment	0.0193 mg/kg
	Soil	0.0183 mg/kg
	Effects on waste water treatment plants	70 mg/l
	Intermittent use/release	1.51 mg/l

8.2 Exposure controls**Engineering measures**

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

Personal protective equipment

Eye 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.

Respiratory protection

: Not required; except in case of aerosol formation. Respiratory protection complying with EN 141. Recommended Filter type:

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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
Odour	: pleasant
Odour Threshold	: not determined
pH	: approx. 8.6 (20 °C)
Melting point/freezing point	: < -5 °C
Decomposition temperature	Not applicable
Boiling point/boiling range	: approx. 90 °C
Flash point	: 48 °C Method: DIN 51755 Part 1
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Upper explosion limit / Upper flammability limit	: Not applicable
Lower explosion limit / Lower flammability limit	: Not applicable
Vapour pressure	: No data available
Vapour density	: No data available
Relative density	: approx. 1.01 g/cm ³ (20 °C)
Solubility(ies) Water solubility	: in all proportions (20 °C)
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: Not applicable
Viscosity Viscosity, dynamic	: approx. 21 mPa*s (20 °C) Method: ISO 3219

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Explosive properties : No data available

Oxidizing properties : No data available

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

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.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate: 1,414 mg/kg
Assessment: Harmful if swallowed.

Acute inhalation toxicity : Acute toxicity estimate: > 50 mg/l

Acute dermal toxicity : Acute toxicity estimate: 3,967 mg/kg

Components:

Alkyl (C12-16) dimethylbenzyl ammonium chloride:

Acute oral toxicity : LD50 (Rat): 300 - 2,000 mg/kg
Method: OECD Test Guideline 401

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Assessment: Harmful if swallowed.

Acute inhalation toxicity : LC50 (Rat): > 2 mg/l

Acute dermal toxicity : LD50 (Rat): 1,100 mg/kg
Assessment: Harmful in contact with skin.**2-phenoxyethanol:**Acute oral toxicity : LD50 (Rat): 1,850 mg/kg
Assessment: Harmful if swallowed.Acute inhalation toxicity : (Rat): Exposure time: 8 h
Remarks: An LC50/ inhalation could not be determined because no mortality of rats was observed at the maximum achievable concentration.Acute dermal toxicity : LD50: > 2,000 mg/kg
Remarks: Based on available data, the classification criteria are not met.**Tridecylpolyethylenglycolether:**Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

Propan-2-ol:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

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

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

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

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:

Acute oral toxicity : Assessment: Harmful if swallowed.

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

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Skin corrosion/irritation**Product:**Assessment : Causes severe skin burns and eye damage.
Method : Calculation method**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Result : Corrosive

2-phenoxyethanol:Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation**Tridecylpolyethylenglycoether:**Species : Rabbit
Method : OECD Test Guideline 404
Result : According to the classification criteria of the European Union,
the product is not considered as being a skin irritant.**Propan-2-ol:**

Result : No skin irritation

Tetrahydroxypropylethyldiamin:Method : OECD Test Guideline 404
Result : No skin irritation**Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:**

Result : Corrosive

Serious eye damage/eye irritation**Product:**Assessment : Causes serious eye damage.
Method : Calculation method**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Result : Corrosive

2-phenoxyethanol:Species : Rabbit
Assessment : Causes serious eye irritation.

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Method : OECD Test Guideline 405

Tridecylpolyethylenglycolether:Species : Rabbit
Method : OECD Test Guideline 405
Result : Causes serious eye damage.**Propan-2-ol:**

Result : Causes serious eye irritation.

Tetrahydroxypropylethylendiamin:Assessment : Causes serious eye irritation.
Method : OECD Test Guideline 405**Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:**

Result : Corrosive

Respiratory or skin sensitisation**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride:**Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.**2-phenoxyethanol:**Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Did not cause sensitisation on laboratory animals.**Tridecylpolyethylenglycolether:**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.**Tetrahydroxypropylethylendiamin:**Species : Guinea pig
Method : OECD Test Guideline 406
Result : Did not cause sensitisation on laboratory animals.

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Remarks : No data available

Germ cell mutagenicity**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Genotoxicity in vitro : Result: Not mutagenic in Ames Test

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

2-phenoxyethanol:

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

Tridecylpolyethylenglycoether:

Genotoxicity in vitro : Result: Not mutagenic in Ames Test

Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test, Based on available data, the classification criteria are not met.

Propan-2-ol:Genotoxicity in vitro : Test Type: Ames test
Method: Mutagenicity (Escherichia coli - reverse mutation assay)
Result: Non mutagenicGenotoxicity in vivo : Species: Mouse
Method: Mutagenicity (micronucleus test)
Remarks: Non mutagenic

Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test

Tetrahydroxypropylethyldiamin:

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

Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:

Germ cell mutagenicity- Assessment : No data available

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Carcinogenicity**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

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

2-phenoxyethanol:

Carcinogenicity - Assessment : No data available

Tridecylpolyethylenglycolether:

Carcinogenicity - Assessment : Did not show carcinogenic effects in animal experiments.

Propan-2-ol:

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

Tetrahydroxypropylethyldiamin:

Carcinogenicity - Assessment : study scientifically unjustified

Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:

Carcinogenicity - Assessment : No data available

Reproductive toxicity**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

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

2-phenoxyethanol:

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

Tridecylpolyethylenglycolether:

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility., Based on available data, the classification criteria are not met.

Propan-2-ol:Effects on foetal development : Species: Rat
Application Route: Oral

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General Toxicity Maternal: NOAEL: 400 mg/kg body weight

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

Tetrahydroxypropylethyldiamin:

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

Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:Effects on foetal development : Species: Rabbit
Application Route: Oral
Dose: 1
Duration of Single Treatment: 13 d
General Toxicity Maternal: NOAEL: 10 mg/kg body weight
Teratogenicity: NOAEL: 30 mg/kg body weight
Embryo-foetal toxicity: NOAEL: 30 mg/kg body weight
Method: OECD Test Guideline 414

Reproductive toxicity - Assessment : No data available

STOT - single exposure**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Remarks : No data available

2-phenoxyethanol:

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

Tridecylpolyethylenglycoether:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

Propan-2-ol:

Assessment : May cause drowsiness or dizziness.

Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:

Remarks : No data available

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STOT - repeated exposure

Components:

Alkyl (C12-16) dimethylbenzyl ammonium chloride:

Remarks : No data available

2-phenoxyethanol:

Remarks : No data available

Tridecylpolyethylenglycoether:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Propan-2-ol:

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

Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:

Assessment : May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

2-phenoxyethanol:

Species : Rat
NOAEL : 400 mg/kg
Application Route : Oral
Remarks : Based on available data, the classification criteria are not met.

Tridecylpolyethylenglycoether:

Species : Rat
NOAEL : 50 mg/kg
Application Route : Oral
Exposure time : 2 year
Target Organs : Heart, Liver, Kidney
Symptoms : Gained body weight

Aspiration toxicity

No data available

Further information

Product:

Remarks : No data is available on the product itself.

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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

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Components:**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Toxicity to fish : LC50 : 0.85 mg/l
 Exposure time: 96 h

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

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

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 (Leuciscus idus (Golden orfe)): > 100 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 : > 500 mg/l
 Exposure time: 48 h

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 500 mg/l
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC: 23 mg/l

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icity) 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)

Tridecylpolyethylenglycoether:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 1 - 10 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 1 - 10 mg/l
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 (Leuciscus idus): > 100 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): > 100 mg/l
Exposure time: 48 h
Test Type: static test

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

Tetrahydroxypropylethylendiamin:

Toxicity to fish : LC50 (Leuciscus idus): > 2,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC0 (Daphnia magna): > 100 mg/l
Exposure time: 48 h
Method: Tested according to Directive 92/69/EEC.

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 150.67 mg/l

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Exposure time: 72 h

Method: Directive 67/548/EEC, Annex V, C.3.

Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 0.43 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna): 0.11 mg/l
aquatic invertebrates : Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EbC50 (Desmodesmus subspicatus (green algae)): 0.03 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic tox- : 10
icity)

Toxicity to fish (Chronic tox- : NOEC: > 0.0523 mg/l
icity) : Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other : NOEC: 0.00023 mg/l
aquatic invertebrates (Chron- : Exposure time: 21 d
ic toxicity) : Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic : 1
toxicity)

12.2 Persistence and degradability**Product:**

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

Chemical Oxygen Demand : approx. 13,640 mg/l
(COD) : Test substance: 1 % solution

Components:**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

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

2-phenoxyethanol:

Biodegradability : Biodegradation: 90 - 100 %
Exposure time: 15 d
Method: OECD Test Guideline 301A
Remarks: According to the results of tests of biodegradability

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this product is considered as being readily biodegradable.

Tridecylpolyethylenglycoether:

Biodegradability : Result: rapidly biodegradable
Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD 301B/ ISO 9439/ EEC 84/449 C5

Propan-2-ol:

Biodegradability : Result: Readily biodegradable.

Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:

Biodegradability : Result: Readily biodegradable.
Exposure time: 28 d
Method: OECD Test Guideline 301A

12.3 Bioaccumulative potential**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Bioaccumulation : Remarks: Does not bioaccumulate.

2-phenoxyethanol:

Bioaccumulation : Bioconcentration factor (BCF): 0.35
Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water : log Pow: 1.16

Tridecylpolyethylenglycoether:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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

Tetrahydroxypropylethylendiamin:

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

Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:

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Bioaccumulation : Remarks: No data available

12.4 Mobility in soil**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Mobility : Remarks: No data available

2-phenoxyethanol:

Mobility : Remarks: Mobile in soils

Tridecylpolyethylenglycolether:

Mobility : Remarks: Adsorbs on soil., immobile

Propan-2-ol:

Mobility : Remarks: Mobile in soils

Tetrahydroxypropylethylendiamin:

Mobility : Remarks: No data available

Amines, N-C12-C14 (even-numbered)-alkyltrimethylenedi-, reaction products with chloroacetic acid:

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..

Components:**Tridecylpolyethylenglycolether:**

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..

12.6 Other adverse effects**Product:**

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

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SECTION 13: Disposal considerations**13.1 Waste treatment methods**

- Product : Dispose of the product according to the defined EWC (European Waste Code) No.
- Contaminated packaging : Take empty packaging to the recycling plant.
- Waste key for the unused product : European waste catalog (EWC) 070601
- Waste key for the unused product(Group) : Waste material of HZVA from fats, lubricants, soaps, detergents, disinfectants and personal protection products.

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) dimethylbenzyl ammonium chloride)
- IMDG : DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
(Alkyl (C12-16) dimethylbenzyl ammonium chloride)
- IATA : DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
(Alkyl (C12-16) dimethylbenzyl ammonium chloride)

14.3 Transport hazard class(es)

- ADR : 8
- IMDG : 8
- IATA : 8

14.4 Packing group

- ADR**
- Packing group : III
- Classification Code : C9
- Hazard Identification Number : 80
- Labels : 8
- IMDG**
- Packing group : III
- Labels : 8
- EmS Code : F-A, S-B

IATA (Cargo)

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

schülke -

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

IATA (Passenger)

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.

For personal protection see section 8.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

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

Volatile organic compounds : Volatile organic compounds (VOC) content: 5 %
Directive 2010/75/EC on the limitation of emissions of volatile organic compounds

Other regulations:

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

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Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values.

Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products

15.2 Chemical safety assessment

Exempt

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

H225	: Highly flammable liquid and vapour.
H302	: Harmful if swallowed.
H312	: Harmful in contact with skin.
H314	: Causes severe skin burns and eye damage.
H318	: Causes serious eye damage.
H319	: Causes serious eye 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

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; 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 Mari-

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time 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No. 1272/2008

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

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

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.