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, 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 number

Emergency telephone number : UK Poisons Emergency number: 0870 600 6266
Carechem 24 International:+44 1235 239670

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, 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)

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 (e.g. butyl rubber) /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
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.
No hazards to be specially mentioned.

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)
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; M = 10 Aquatic Chronic 1; H410; M = 1	>= 20 - < 25
2-phenoxyethanol	122-99-6 204-589-7 603-098-00-9 - - -	Acute Tox. 4; H302 Eye Irrit. 2; H319	>= 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	>= 3 - < 10
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	>= 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	Acute Tox. 4; H302 Acute Tox. 3; H311	>= 0.25 - < 1

	- - - 01-2120050368-56-XXXX	Skin Corr. 1C; H314 Eye Dam. 1; H318 STOT RE 2; H373 Aquatic Acute 1; H400; M = 10 Aquatic Chronic 1; H410; M = 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.

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.

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

5.3 Advice for firefighters

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

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.

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/m3	GB EH40
		STEL	500 ppm 1,250 mg/m3	GB EH40

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

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/m3
propan-2-ol	Workers	Skin contact	Long-term systemic effects	888 mg/kg
	Workers	Inhalation	Long-term systemic effects	500 mg/m3
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	Workers	Skin contact	Long-term systemic effects	4.2 mg/kg
	Workers	Inhalation	Long-term systemic effects	29.4 mg/m3

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

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
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
	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

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.

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
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
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	:	ca. 1.01 g/cm3 (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
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: 1,467 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): 1,850 mg/kg Method: OECD Test Guideline 401
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 (Rabbit): > 5,000 mg/kg Remarks: Based on available data, the classification criteria are not met.

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

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
Assessment : No skin irritation
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

Product:

Remarks : Causes serious eye damage.

Components:

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

Result	:	Irreversible effects on the eye

2-phenoxyethanol:

Species	:	Rabbit
Assessment	:	Causes serious eye irritation.
Method	:	OECD Test Guideline 405
Result	:	irritating

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

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
Assessment	:	Did not cause sensitisation on laboratory animals.
Method	:	OECD Test Guideline 406

Result : Did not cause sensitisation on laboratory animals.

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

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.

2-phenoxyethanol:

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

Carcinogenicity

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.

Carcinogenicity - Assessment : No data 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.

Carcinogenicity - Assessment : 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

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.

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.
Did not show teratogenic effects in animal experiments.

2-phenoxyethanol:

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.
Did not show teratogenic effects in animal experiments.

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.
Ingestion of excessive amounts by pregnant animals resulted in maternal and foetal toxicity.

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

Glycine, aminoalkyl derivs.:

Reproductive toxicity - Assessment : No data available
No data available

STOT - single exposure

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:

Assessment : May cause drowsiness or dizziness.

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

Remarks : No data available

STOT - repeated exposure

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

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

Species	:	Rat
NOAEL	:	50 mg/kg
Application Route	:	Oral
Exposure time	:	2 year
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

No data available

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
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)): > 100 mg/l
Exposure time: 96 h

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

Toxicity to algae/aquatic plants : EC50 (green algae): > 100 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)

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
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.
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

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)
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.

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..

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:

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

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)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)

ADR	:	8
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.
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 - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import	:	Not applicable

of dangerous chemicals

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	:	Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 5.45 %
Regulation (EC) No. 648/2004, as amended	:	5 % or over but less than 15 %: Non-ionic surfactants Other constituents: Disinfectants, Perfumes

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.

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

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

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.
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.
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 - 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 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; 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 of the mixture:		**Classification procedure:**
Acute Tox. 4	H302	Calculation method
Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Aquatic Acute 1	H400	Based on product data or assessment
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.