

# Safety Data Sheet

## according to Regulation (EC) No. 1907/2006 (REACH)

**Trade name :** Orotol® plus pH 7 Disinfection of suction system  
**Revision date :** 23.05.2023  
**Print date :** 23.05.2023

**Version (Revision) :** 2.0.0 (1.0.0)

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

#### 1.1 Product identifier

Orotol® plus pH 7 Disinfection of suction system  
Unique Formula Identifier : ANWQ-W9KM-R30C-AHTD

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

##### Relevant identified uses

Orotol® plus pH 7 is a highly effective aldehyde-free concentrate for the simultaneous disinfection, deodorization, cleaning and care of dental suction systems as well as spittoon bowls, being likewise suitable for all amalgam separators.

##### Products Category [PC]

PC 0 - Other  
Disinfectants

##### Uses advised against

None, if handled according to order.

##### Remark

The product is intended for professional use.

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

##### Supplier

orochemie GmbH + Co. KG

**Street :** Max-Planck-Straße 27

**Postal code/City :** 70806 Kornwestheim

**Telephone :** +49 7154 1308-0

**Telefax :** +49 7154 1308-40

**Information contact :** DÜRR DENTAL SE, Höpfigheimer Str. 17, 74321 Bietigheim-Bissingen, Germany  
Tel: +49 7142 705-0, Fax: +49 7142 705-500, info@duerrdental.com

in Great Britain/Ireland:

DÜRR DENTAL [Products] UK Ltd., 14 Linnell Way - Telford Way Industrial Estate, Kettering Northants NN16 8PS,  
United Kingdom, info@duerruk.com

#### 1.4 Emergency telephone number

INT: +49 6132 84463 (24 h/7 d)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008 [CLP]

Skin Irrit. 2 ; H315 - Skin corrosion/irritation : Category 2 ; Causes skin irritation.

Eye Dam. 1 ; H318 - Serious eye damage/eye irritation : Category 1 ; Causes serious eye damage.

##### Classification procedure

The classification was carried out according to the calculation method of Regulation No. (EC) 1272/2008 [CLP].

#### 2.2 Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

##### Hazard pictograms



Corrosion (GHS05)

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### Signal word

Danger

### Hazard components for labelling

ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1

### Hazard statements

H318 Causes serious eye damage.

H315 Causes skin irritation.

### Precautionary statements

P280 Wear protective gloves and eye/face protection.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container to hazardous or special waste collection point.

## 2.3 Other hazards

The mixture does not contain any substances that have endocrine disrupting properties. The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Description

Orotol® plus pH 7 contains quaternary ammonium compounds, non-ionic surfactants, complexing agents, special antifoaming agents, fragrances and auxiliary agents in aqueous solution.

#### Hazardous ingredients

2-ETHYLHEXANOL ETHOXYLATE ; REACH No. : Polymer ; CAS No. : 26468-86-0

Weight fraction :  $\geq 5 - < 10$  %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; REACH No. : - ; EC No. : 270-325-2; CAS No. : 68424-85-1

Weight fraction :  $\geq 3 - < 5$  %

Classification 1272/2008 [CLP] : Skin Corr. 1B ; H314 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Aquatic Acute 1 ; H400 Aquatic Chronic 1 ; H410

Specific Conc. Limits : (M Chronic=1) • (M Acute=10)

N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; REACH No. : 01-2119984313-35 ; EC No. : 298-613-3; CAS No. : 93820-33-8

Weight fraction :  $< 0,25$  %

Classification 1272/2008 [CLP] : Aquatic Acute 1 ; H400 Aquatic Chronic 2 ; H411

HEXYL CINNAMAL ; REACH No. : 01-2119533092-50 ; EC No. : 202-983-3; CAS No. : 101-86-0

Weight fraction :  $< 0,05$  %

Classification 1272/2008 [CLP] : Skin Sens. 1B ; H317 Aquatic Acute 1 ; H400 Aquatic Chronic 2 ; H411

Specific Conc. Limits : (M Acute=1)

LINALOOL ; REACH No. : 01-2119474016-42 ; EC No. : 201-134-4; CAS No. : 78-70-6

Weight fraction :  $< 0,05$  %

Classification 1272/2008 [CLP] : Skin Irrit. 2 ; H315 Skin Sens. 1B ; H317 Eye Irrit. 2 ; H319

#### Additional information

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

When in doubt or if symptoms are observed, get medical advice.

#### Following inhalation

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Provide fresh air.

### **In case of skin contact**

Wash with plenty of water. When in doubt or if symptoms are observed, get medical advice.

### **After eye contact**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

### **Following ingestion**

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. Call a physician immediately.

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

Causes serious eye damage. Causes skin irritation.

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

None

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>) Extinguishing powder Water spray jet Water mist The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

#### **Unsuitable extinguishing media**

Full water jet

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

None known.

#### **Hazardous combustion products**

None known.

### **5.3 Advice for firefighters**

Adapt protective equipment to surrounding fire.

#### **Special protective equipment for firefighters**

Adapt protective equipment to surrounding fire.

## **SECTION 6: Accidental release measures**

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

Use personal protection equipment. See protective measures under point 7 and 8.

#### **For non-emergency personnel**

Use personal protection equipment. See protective measures under point 7 and 8.

#### **For emergency responders**

##### **Personal protection equipment**

See protective measures under point 7 and 8.

### **6.2 Environmental precautions**

No special environmental measures are necessary.

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

#### **For cleaning up**

No special measures are necessary.

### **6.4 Reference to other sections**

None

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Keep/Store only in original container. Please note safety instructions and directions for use on the drum.

#### Protective measures

##### Measures to prevent fire

Usual measures for fire prevention. When using do not smoke.

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

##### Requirements for storage rooms and vessels

Keep/Store only in original container. Keep container tightly closed and in a well-ventilated place.

##### Hints on joint storage

Store the foodstuffs separately.

#### 7.3 Specific end use(s)

None

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### DNEL-/PNEC-values

There are no data available on the preparation itself.

##### DNEL/DMEL

ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1

Limit value type : DNEL Consumer (systemic)

Exposure route : Oral

Exposure frequency : Long-term

Limit value : 3,4 mg/kg

Limit value type : DNEL Consumer (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 3,4 mg/kg

Limit value type : DNEL Consumer (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 1,64 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 3,96 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 5,7 mg/kg

N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; CAS No. : 93820-33-8

Limit value type : DNEL Consumer (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 3,125 mg/m<sup>3</sup>

Limit value type : DNEL Consumer (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 1,79 mg/kg

Assessment factor : 24 h

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Limit value type : DNEL Consumer (systemic)  
Exposure route : Oral  
Exposure frequency : Long-term  
Limit value : 1,79 mg/kg  
Assessment factor : 24 h

Limit value type : DNEL worker (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 8,8 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic)  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 2,5 mg/kg  
Assessment factor : 24 h

HEXYL CINNAMAL ; CAS No. : 101-86-0

Limit value type : DNEL worker (local)  
Exposure route : Inhalation  
Exposure frequency : Short-term  
Limit value : 6,28 mg/m<sup>3</sup>

Limit value type : DNEL worker (local)  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 525 µg/cm<sup>2</sup>

Limit value type : DNEL worker (local)  
Exposure route : Dermal  
Exposure frequency : Short-term  
Limit value : 525 µg/cm<sup>2</sup>

Limit value type : DNEL worker (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 0,078 mg/m<sup>3</sup>

LINALOOL ; CAS No. : 78-70-6

Limit value type : DNEL worker (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 2,8 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic)  
Exposure route : Inhalation  
Exposure frequency : Short-term  
Limit value : 16,5 mg/m<sup>3</sup>

HEXYL CINNAMAL ; CAS No. : 101-86-0

Limit value type : DNEL worker (systemic)  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 18,2 mg/kg bw  
Assessment factor : 24 h

LINALOOL ; CAS No. : 78-70-6

Limit value type : DNEL worker (systemic)  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 2,5 mg/kg bw  
Assessment factor : 24 h

Limit value type : DNEL worker (systemic)  
Exposure route : Dermal  
Exposure frequency : Short-term

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Limit value : 5 mg/kg bw  
Assessment factor : 24 h

### PNEC

ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1

Limit value type : PNEC (Aquatic, freshwater)  
Limit value : 0,001 mg/l  
Limit value type : PNEC (Aquatic, marine water)  
Limit value : 0,001 mg/l  
Limit value type : PNEC (Industrial)  
Exposure route : Soil  
Limit value : 7 mg/kg  
Limit value type : PNEC (Sediment, freshwater)  
Limit value : 12,27 mg/kg  
Limit value type : PNEC (Sediment, marine water)  
Limit value : 13,09 mg/kg  
Limit value type : PNEC (Sewage treatment plant)  
Limit value : 0,4 mg/l

N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; CAS No. : 93820-33-8

Limit value type : PNEC (Aquatic, freshwater)  
Limit value : 0,00157 mg/l  
Limit value type : PNEC (Aquatic, intermittent release)  
Limit value : 0,00475 mg/l  
Limit value type : PNEC (Aquatic, marine water)  
Limit value : 0,00016 mg/l  
Limit value type : PNEC (Sediment, freshwater)  
Limit value : 1,25 mg/kg  
Limit value type : PNEC (Sediment, marine water)  
Limit value : 0,125 mg/kg  
Limit value type : PNEC (Soil)  
Limit value : 0,44 mg/kg  
Limit value type : PNEC (Secondary poisoning)  
Limit value : 33,3 mg/kg  
Limit value type : PNEC (Sewage treatment plant)  
Limit value : 100 mg/l

HEXYL CINNAMAL ; CAS No. : 101-86-0

Limit value type : PNEC (Aquatic, freshwater)  
Exposure time : Short-term  
Limit value : 0,001 mg/l

LINALOOL ; CAS No. : 78-70-6

Limit value type : PNEC (Aquatic, freshwater)  
Exposure time : Short-term  
Limit value : 0,2 mg/l  
Limit value type : PNEC (Aquatic, marine water)  
Exposure time : Short-term  
Limit value : 0,02 mg/l

HEXYL CINNAMAL ; CAS No. : 101-86-0

Limit value type : PNEC (Aquatic, marine water)  
Exposure time : Short-term  
Limit value : 0 mg/l  
Limit value type : PNEC (Sediment, freshwater)  
Exposure time : Short-term  
Limit value : 3,2 mg/kg

LINALOOL ; CAS No. : 78-70-6

Limit value type : PNEC (Sediment, freshwater)  
Exposure time : Short-term

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Limit value : 2,22 mg/kg  
Limit value type : PNEC (Sediment, marine water)  
Exposure time : Short-term  
Limit value : 0,222 mg/kg  
HEXYL CINNAMAL ; CAS No. : 101-86-0  
Limit value type : PNEC (Sediment, marine water)  
Exposure time : Short-term  
Limit value : 0,064 mg/kg  
Limit value type : PNEC (Soil)  
Exposure time : Short-term  
Limit value : 0,398 mg/kg  
LINALOOL ; CAS No. : 78-70-6  
Limit value type : PNEC (Soil)  
Exposure time : Short-term  
Limit value : 0,327 mg/kg  
Limit value type : PNEC (Sewage treatment plant)  
Exposure time : Short-term  
Limit value : 10 mg/l  
HEXYL CINNAMAL ; CAS No. : 101-86-0  
Limit value type : PNEC (Sewage treatment plant)  
Exposure time : Short-term  
Limit value : 10 mg/l

### 8.2 Exposure controls

#### Personal protection equipment

##### Eye/face protection

Eye glasses with side protection EN 166

##### Skin protection

###### Hand protection

Short-term exposure (Level 2: < 30 min): disposable gloves to EN374 category III, e.g. nitrile rubber, material thickness 0.1 mm.

Long-term exposure (Level 6: < 480 min): protective gloves to EN374 category III, e.g. nitrile rubber, material thickness 0.7 mm.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.

###### Body protection

Body protection: not required.

##### Respiratory protection

No special measures are necessary.

#### General information

Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and after work. Separate storage of work clothes. When using do not eat, drink, smoke, sniff.

#### Other protection measures

Provide adequate ventilation.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance :** Liquid

**Colour :** yellow

**Odour :** Lemon

#### Safety characteristics

**Melting point/freezing point :** ( 1013 hPa ) not determined

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<b>Initial boiling point and boiling range :</b>	( 1013 hPa )		not determined
<b>Decomposition temperature :</b>	( 1013 hPa )		not determined
<b>Flash point :</b>			not applicable
<b>Auto-ignition temperature :</b>			not determined
<b>Lower explosion limit :</b>			not applicable
<b>Upper explosion limit :</b>			not applicable
<b>Density :</b>	( 20 °C )	approx.	1,04 g/cm <sup>3</sup>
<b>pH value :</b>			7 - 8
<b>pH value :</b>	( 20 °C / 20 g/l )		6 - 7
<b>log P O/W :</b>			not determined
<b>Odour threshold :</b>			not determined
<b>Maximum VOC content (EC) :</b>			11 Weight-%
<b>Oxidising liquids :</b>		Not applicable.	
<b>Explosive properties :</b>		Not applicable.	
<b>Corrosive to metals :</b>		Not corrosive to metals.	

### 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None, if handled according to order.

### 10.2 Chemical stability

Stable under recommended storage and handling conditions (see section 7).

### 10.3 Possibility of hazardous reactions

None, if handled according to order.

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials

No information available.

### 10.6 Hazardous decomposition products

None known.

## SECTION 11: Toxicological information

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

#### Acute toxicity

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

#### Acute oral toxicity

Parameter :	ATEmix
Exposure route :	Oral
Effective dose :	15385 mg/kg
Parameter :	LD50 ( 2-ETHYLHEXANOL ETHOXYLATE ; CAS No. : 26468-86-0 )
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )
Exposure route :	Oral
Species :	Rat
Effective dose :	397,5 mg/kg
Method :	OECD 401
Parameter :	LD50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )



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Exposure route : Oral  
Species : Rat  
Effective dose : 795 mg/kg  
Parameter : LD50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 344 mg/kg  
Parameter : LD50 ( N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; CAS No. : 93820-33-8 )  
Exposure route : Oral  
Species : Rat  
Effective dose : > 2000 mg/kg  
Method : OECD 401  
Parameter : LD50 ( HEXYL CINNAMAL ; CAS No. : 101-86-0 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 3100 mg/kg  
Parameter : LD50 ( LINALOOL ; CAS No. : 78-70-6 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 2790 mg/kg  
Parameter : ATE ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Exposure route : Oral  
Effective dose : 500 mg/kg

### Acute dermal toxicity

Parameter : ATEmix  
Exposure route : Dermal  
Effective dose : not relevant  
Parameter : LD50 ( 2-ETHYLHEXANOL ETHOXYLATE ; CAS No. : 26468-86-0 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : > 2000 mg/kg  
Parameter : LD50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 3340 mg/kg  
Exposure time : 24 h  
Parameter : LD50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 3412 mg/kg  
Parameter : LD50 ( HEXYL CINNAMAL ; CAS No. : 101-86-0 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : > 3000 mg/kg  
Parameter : LD50 ( LINALOOL ; CAS No. : 78-70-6 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 5610 mg/kg  
Parameter : LD50 ( LINALOOL ; CAS No. : 78-70-6 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 2000 mg/kg

### Acute inhalation toxicity

Parameter : ATEmix  
Exposure route : Inhalation (vapour)

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Effective dose : not relevant  
Parameter : LD50 ( 2-ETHYLHEXANOL ETHOXYLATE ; CAS No. : 26468-86-0 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : > 20,1 mg/l

### Corrosion

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/eye irritation

Causes serious eye damage.

### Respiratory or skin sensitisation

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

### Repeated dose toxicity (subacute, subchronic, chronic)

#### Subacute oral toxicity

Parameter : NOAEL(C) ( N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; CAS No. : 93820-33-8 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 1000 mg/kg  
Exposure time : 28 day(s)  
Method : OECD 407

### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

#### Carcinogenicity

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

#### Germ cell mutagenicity

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

#### Reproductive toxicity

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

#### Adverse effects on developmental toxicity

Parameter : NOAEL(C) ( N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; CAS No. : 93820-33-8 )  
Exposure route : Oral  
Species : Rat  
Effective dose : => 300 mg/kg  
Method : OECD 421

### STOT-single exposure

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

### STOT-repeated exposure

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

### Aspiration hazard

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

## 11.2 Information on other hazards

### Endocrine disrupting properties

The mixture does not contain any substances that have endocrine disrupting properties.

### Additional information

The classification was carried out according to the calculation method of Regulation No. (EC) 1272/2008 [CLP].

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity

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

#### Acute (short-term) fish toxicity

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Parameter : LC50 ( 2-ETHYLHEXANOL ETHOXYLATE ; CAS No. : 26468-86-0 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Effective dose : 13 mg/l  
Exposure time : 96 h

Parameter : LC50 ( 2-ETHYLHEXANOL ETHOXYLATE ; CAS No. : 26468-86-0 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 10 - 100 mg/l  
Exposure time : 96 h

Parameter : LC50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 0,85 mg/l  
Exposure time : 96 h

Parameter : LC50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Fish  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 0,1 - 1 mg/l  
Exposure time : 96 h

Parameter : LC50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 0,28 mg/l  
Exposure time : 96 h

Parameter : LC50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Lepomis macrochirus (Bluegill)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 0,515 mg/l  
Exposure time : 96 h

Parameter : LC50 ( N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; CAS No. : 93820-33-8 )  
Species : Danio rerio (zebrafish)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 1000 mg/l  
Exposure time : 96 h  
Method : OECD 203

Parameter : LC50 ( LINALOOL ; CAS No. : 78-70-6 )  
Species : Fish  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 27,8 mg/l  
Exposure time : 96 h

### Chronic (long-term) fish toxicity

Parameter : NOEC ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Chronic (long-term) fish toxicity  
Effective dose : 0,032 mg/l  
Exposure time : 816 h

### Acute (short-term) toxicity to crustacea

Parameter : EC50 ( 2-ETHYLHEXANOL ETHOXYLATE ; CAS No. : 26468-86-0 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 6,5 mg/l  
Exposure time : 48 h

Parameter : EC50 ( 2-ETHYLHEXANOL ETHOXYLATE ; CAS No. : 26468-86-0 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity

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Effective dose : > 1 - 10 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 0,016 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Daphnia pulex (water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 0,01 - 0,1 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Daphnia pulex (water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 0,016 mg/l  
Parameter : EC50 ( N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; CAS No. : 93820-33-8 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 0,475 mg/l  
Exposure time : 48 h  
Method : OECD 202  
Parameter : EC50 ( LINALOOL ; CAS No. : 78-70-6 )  
Species : Daphnia  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 59 mg/l  
Exposure time : 48 h

### Chronic (long-term) toxicity to aquatic invertebrate

Parameter : NOEC ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 0,0042 mg/l  
Exposure time : 504 h  
Parameter : NOEC ( N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; CAS No. : 93820-33-8 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 0,028 mg/l  
Exposure time : 504 h  
Method : OECD 211

### Acute (short-term) toxicity to algae and cyanobacteria

Parameter : EC50 ( 2-ETHYLHEXANOL ETHOXYLATE ; CAS No. : 26468-86-0 )  
Species : Scenedesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 6,6 mg/l  
Exposure time : 72 h  
Parameter : EC50 ( 2-ETHYLHEXANOL ETHOXYLATE ; CAS No. : 26468-86-0 )  
Species : Scenedesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 1 - 10 mg/l  
Exposure time : 72 h  
Parameter : IC50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Pseudokirchneriella subcapitata  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 0,01 - 0,1 mg/l  
Exposure time : 72 h

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Parameter : ErC50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Pseudokirchneriella subcapitata  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 0,049 mg/l  
Exposure time : 72 h  
Method : OECD 201

Parameter : EC50 ( N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; CAS No. : 93820-33-8 )  
Species : Desmodesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 0,962 mg/l  
Exposure time : 72 h  
Method : OECD 201

Parameter : EC50 ( LINALOOL ; CAS No. : 78-70-6 )  
Species : Algae  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 141,4 mg/l  
Exposure time : 96 h

### Chronic (long-term) toxicity to aquatic algae and cyanobacteria

Parameter : NOEC ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Pseudokirchneriella subcapitata  
Evaluation parameter : Chronic (long-term) algae toxicity  
Effective dose : > 0,001 - 0,01 mg/l  
Method : OECD 201

### Toxicity to microorganisms

Parameter : EC50 ( 2-ETHYLHEXANOL ETHOXYLATE ; CAS No. : 26468-86-0 )  
Species : Bacteria toxicity  
Effective dose : 680 mg/l  
Exposure time : 4 h

Parameter : EC50 ( ALKYL-BENZYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 68424-85-1 )  
Species : Bacteria toxicity  
Effective dose : 7,75 mg/l  
Exposure time : 3 h  
Method : OECD 209

Parameter : EC50 ( N-(2-ETHYLHEXYL)ISONONAN-1-AMIDE ; CAS No. : 93820-33-8 )  
Species : Bacteria toxicity  
Effective dose : > 1000 mg/l  
Exposure time : 3 h  
Method : OECD 209

Parameter : EC50 ( LINALOOL ; CAS No. : 78-70-6 )  
Species : Bacteria toxicity  
Effective dose : > 100 mg/l  
Exposure time : 3 h

### Sewage treatment plant

Technically correct releases of minimal concentrations to adapted biological sewage plants, will not disturb the biodegradability of activated sludge.

## 12.2 Persistence and degradability

### Abiotic degradation

No data available.

### Biodegradation

Readily biodegradable (according to OECD criteria). Bridging principle "Substantially similar mixtures".

## 12.3 Bioaccumulative potential

No information available.

## 12.4 Mobility in soil

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### Distribution

No data available

### 12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6 Endocrine disrupting properties

The mixture does not contain any substances that have endocrine disrupting properties.

### 12.7 Other adverse effects

No information available.

### 12.8 Additional ecotoxicological information

Prevent from flowing into surface water/ground water.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Directive 2008/98/EC (Waste Framework Directive)

##### After intended use

##### Disposal operations

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

##### Recovery operations

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

##### Waste codes/waste designations according to EWC/AVV

Concentrate/larger quantities: 18 01 06\* (disinfectant).

## SECTION 14: Transport information

### 14.1 UN number

No dangerous good in sense of these transport regulations.

### 14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

### 14.3 Transport hazard class(es)

No dangerous good in sense of these transport regulations.

### 14.4 Packing group

No dangerous good in sense of these transport regulations.

### 14.5 Environmental hazards

No dangerous good in sense of these transport regulations.

### 14.6 Special precautions for user

None

### 14.7 Maritime transport in bulk according to IMO instruments

not applicable

## SECTION 15: Regulatory information

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

#### EU legislation

##### Authorisations and/or restrictions on use

##### Restrictions on use

Regulation (EC) No. 1907/2006 (REACH), Annex XVII (restrictions)

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Use restriction according to REACH annex XVII, no. : 3, 40, 75

### National regulations

#### Restrictions of occupation

According to directive 94/33/EC, juveniles are only allowed to handle this product as long as all effects of dangerous substances are prevented.

## 15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### 16.1 Indication of changes

02. Labelling according to Regulation (EC) No. 1272/2008 [CLP] · 03. Hazardous ingredients · 12. Aquatic toxicity · 14. UN proper shipping name - Land transport (ADR/RID) · 14. UN proper shipping name - Sea transport (IMDG) · 14. UN proper shipping name - Air transport (ICAO-TI / IATA-DGR)

### 16.2 Abbreviations and acronyms

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimates  
CAS = Chemical Abstracts Service  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
CMR = Carcinogen, Mutagen or Reproductive toxicant  
CO<sub>2</sub> = Carbon dioxide  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
EC = European Commission  
EC50 = Half maximal effective concentration  
EN = European Standard (Norm)  
EU = European Union  
EUH statement = CLP-specific Hazard statement  
EWC = European Waste Catalogue  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
H statement = GHS Hazard statement  
IATA = International Air Transport Association ICAO-TI = International Civil Aviation Organization-Technical Instructions  
IMDG = International Maritime Dangerous Goods  
LC50 = Median lethal concentration  
LD50 = Median lethal dose  
LogPow = Logarithm of the octanol/water partition coefficient  
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
NOEC/NOEL = No observed effect concentration/level  
OECD = Organisation for Economic Co-operation and Development  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
RMM = Risk Management Measure  
RRN = REACH Registration Number  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure  
SVHC = Substances of Very High Concern  
TLV/STEL = Threshold limit value/short-term exposure limit  
TLV/TWA = Threshold limit value/time weighted average  
UN = United Nations  
VOC = Volatile Organic Compound  
vPvB = Very Persistent and Very Bioaccumulative

### 16.3 Key literature references and sources for data

None

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## 16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

The classification was carried out according to the calculation method of Regulation No. (EC) 1272/2008 [CLP].

## 16.5 Relevant H- and EUH-phrases (Number and full text)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

## 16.6 Training advice

None

## 16.7 Additional information

Follow the instructions for use on the label.

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The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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