

# Safety Data Sheet

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

**Trade name :** Orotol® plus Disinfection of suction systems  
**Revision date :** 04.01.2023  
**Print date :** 27.03.2023

**Version (Revision) :** 7.0.0 (6.0.1)

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

#### 1.1 Product identifier

Orotol® plus Disinfection of suction systems  
Unique Formula Identifier : 6HQ8-Q5CG-130P-2RS1

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

##### Relevant identified uses

Orotol® plus 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]

Met. Corr. 1 ; H290 - Corrosive to metals : Category 1 ; May be corrosive to metals.

Skin Corr. 1C ; H314 - Skin corrosion/irritation : Category 1C ; Causes severe skin burns and eye damage.

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

Aquatic Chronic 3 ; H412 - Hazardous to the aquatic environment : Chronic 3 ; Harmful to aquatic life with long lasting effects.

##### Classification procedure

The classification was carried out according to the calculation method of Regulation No. (EC) 1272/2008 [CLP] as well as in-house investigations.

#### 2.2 Label elements

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

Hazard pictograms

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Corrosion (GHS05)

### Signal word

Danger

### Hazard components for labelling

DIMETHYLDIOCTYLAMMONIUMCHLORIDE ; CAS No. : 5538-94-3

POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3

### Hazard statements

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H412 Harmful to aquatic life with long lasting effects.

### 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.  
P353 Rinse skin with water [or shower].  
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 contains quaternary ammonium compounds, alkaline cleaning agents, complexing agents, special antifoaming agents, fragrances and auxiliary agents in aqueous solution.

#### Hazardous ingredients

TETRAPOTASSIUM DIPHOSPHATE ; REACH No. : 01-2119489369-18 ; EC No. : 230-785-7; CAS No. : 7320-34-5

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

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

DIMETHYLDIOCTYLAMMONIUMCHLORIDE ; REACH No. : 01-2120767055-53 ; EC No. : 226-901-0; CAS No. : 5538-94-3

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

Classification 1272/2008 [CLP] : Acute Tox. 2 ; H310 Acute Tox. 3 ; H301 Skin Corr. 1B ; H314 Eye Dam. 1 ; H318 Aquatic Acute 1 ; H400 Aquatic Chronic 1 ; H410

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

DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; REACH No. : - ; EC No. : 287-089-1; CAS No. : 85409-22-9

Weight fraction :  $\geq 0,5 - < 1$  %

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)

POTASSIUM HYDROXIDE ; REACH No. : 01-2119487136-33 ; EC No. : 215-181-3; CAS No. : 1310-58-3

Weight fraction :  $\geq 0,5 - < 1$  %

Classification 1272/2008 [CLP] : Met. Corr. 1 ; H290 Skin Corr. 1A ; H314 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302

Specific Conc. Limits : Skin Corr. 1A ; H314: C  $\geq 5$  % • Eye Dam. 1 ; H318: C  $\geq 2$  % • Skin Corr. 1B ; H314: C  $\geq 2$  % • Skin Corr. 1C ; H314: C  $\geq 2$  % • Eye Irrit. 2 ; H319: C  $\geq 0,5$  % • Skin Irrit. 2 ; H315: C  $\geq 0,5$  %

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HEXYL CINNAMAL ; REACH No. : 01-2119533092-50 ; EC No. : 202-983-3; CAS No. : 101-86-0  
Weight fraction : < 0,02 %  
Classification 1272/2008 [CLP] : Skin Sens. 1B ; H317 Aquatic Acute 1 ; H400 Aquatic Chronic 2 ; H411  
Specific Conc. Limits : (M Acute=1)

### 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

Remove contaminated, saturated clothing immediately. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

#### Following inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician.

#### 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

If swallowed, immediately drink: Water Never give anything by mouth to an unconscious person or a person with cramps. Do NOT induce vomiting. Call a physician immediately.

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

Causes severe skin burns and eye damage.

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

If unconscious but breathing normally, place in recovery position and seek medical advice.

## 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.

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### 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

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

#### For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

#### Other information

Treat the recovered material as prescribed in the section on waste disposal.

### 6.4 Reference to other sections

None

## 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. Handle and open container with care. Provide adequate ventilation. Do not breathe vapour/aerosol.

#### 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

#### Occupational exposure limit values

POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3

Limit value type (country of origin) : TLV/STEL ( GB )

Limit value : 2 mg/m<sup>3</sup>

#### DNEL-/PNEC-values

There are no data available on the preparation itself.

##### DNEL/DMEL

TETRAPOTASSIUM DIPHOSPHATE ; CAS No. : 7320-34-5

Limit value type : DNEL Consumer (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 0,68 mg/l

Limit value type : DNEL Consumer (systemic)

Exposure route : Oral

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Exposure frequency : Long-term  
Limit value : > 70 mg/kg  
Assessment factor : 24 h  
Limit value type : DNEL Consumer (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 10,87 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 2,79 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 44,08 mg/m<sup>3</sup>

**DIMETHYLDIOCTYLAMMONIUMCHLORIDE ; CAS No. : 5538-94-3**  
Limit value type : DNEL/DMEL (Consumer)  
Exposure route : Oral  
Exposure frequency : Long-term  
Limit value : 7,5 mg/kg  
Assessment factor : 24 h  
Limit value type : DNEL/DMEL (Consumer)  
Exposure route : Dermal  
Limit value : 7,5 mg/kg  
Assessment factor : 24 h  
Limit value type : DNEL/DMEL (Industrial)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 18,79 mg/m<sup>3</sup>  
Limit value type : DNEL/DMEL (Industrial)  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 2,67 mg/kg

**POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3**  
Limit value type : DNEL Consumer (local)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 1 mg/m<sup>3</sup>  
Limit value type : DNEL worker (local)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 1 mg/m<sup>3</sup>

**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>

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Limit value type : DNEL worker (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 0,078 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic)  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 18,2 mg/kg bw  
Assessment factor : 24 h

### PNEC

TETRAPOTASSIUM DIPHOSPHATE ; CAS No. : 7320-34-5

Limit value type : PNEC (Aquatic, freshwater)  
Limit value : 0,05 mg/l  
Limit value type : PNEC (Aquatic, intermittent release)  
Limit value : 0,5 mg/l  
Limit value type : PNEC (Aquatic, marine water)  
Limit value : 0,005 mg/l  
Limit value type : PNEC (Sewage treatment plant)  
Limit value : 50 mg/l

DIMETHYLDIOCTYLAMMONIUMCHLORIDE ; CAS No. : 5538-94-3

Limit value type : PNEC (Aquatic, freshwater)  
Limit value : 0,001 mg/l  
Limit value type : PNEC (Aquatic, marine water)  
Limit value : 0,00001 mg/l  
Limit value type : PNEC (Sewage treatment plant)  
Limit value : 0,5 mg/l

DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9

Limit value type : PNEC (Aquatic, freshwater)  
Limit value : 0,00034 mg/l  
Limit value type : PNEC (Aquatic, marine water)  
Limit value : 0,0342 ppm  
Limit value type : PNEC (Sediment, freshwater)  
Limit value : 5,61 mg/kg  
Limit value type : PNEC (Sediment, marine water)  
Limit value : 0,561 mg/kg  
Limit value type : PNEC (Sewage treatment plant)  
Limit value : 0,273 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  
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  
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  
Limit value type : PNEC (Sewage treatment plant)  
Exposure time : Short-term

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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

Usually no personal respiratory protection necessary.

#### General information

Keep away from food, drink and animal feedingstuffs. Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing. 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

<b>Melting point/freezing point :</b>	( 1013 hPa )				not determined
<b>Initial boiling point and boiling range :</b>	( 1013 hPa )	approx.	100	°C	
<b>Decomposition temperature :</b>	( 1013 hPa )				not determined
<b>Flash point :</b>					not applicable
<b>Auto-ignition temperature :</b>					not applicable
<b>Lower explosion limit :</b>					not applicable
<b>Upper explosion limit :</b>					not applicable
<b>Vapour pressure :</b>	( 50 °C )				not determined
<b>Density :</b>	( 20 °C )	approx.	1,09	g/cm <sup>3</sup>	
<b>Solvent separation test :</b>	( 20 °C )	<	3	%	
<b>Water solubility :</b>	( 20 °C )		100	Weight-%	
<b>pH :</b>			12,5 - 13,5		
<b>pH :</b>	( 20 °C / 20 g/l )		10 - 11		
<b>log P O/W :</b>					not determined
<b>Flow time :</b>	( 20 °C )	<	20	s	DIN-cup 4 mm
<b>Odour threshold :</b>					not determined
<b>Maximum VOC content (EC) :</b>			6,6	Weight-%	
<b>Oxidising liquids :</b>					Not applicable.
<b>Explosive properties :</b>					Not applicable.
<b>Corrosive to metals :</b>					May be corrosive to metals.

### 9.2 Other information

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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). Reactions with acids: development of heat.

#### 10.3 Possibility of hazardous reactions

Reactions with acids possible

#### 10.4 Conditions to avoid

No information available.

#### 10.5 Incompatible materials

Acid

#### 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 :	LD50
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Method :	OECD 401
Parameter :	ATEmix
Exposure route :	Oral
Effective dose :	not relevant
Parameter :	ATE ( DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9 )
Exposure route :	Oral
Effective dose :	500 mg/kg
Parameter :	ATE ( POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3 )
Exposure route :	Oral
Effective dose :	500 mg/kg

##### Acute dermal toxicity

Parameter :	LD50
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 2000 mg/kg
Method :	OECD 402
Parameter :	ATEmix
Exposure route :	Dermal
Effective dose :	not relevant

##### Acute inhalation toxicity

Parameter :	ATEmix
Exposure route :	Inhalation (vapour)
Effective dose :	not relevant
Parameter :	LC50 ( TETRAPOTASSIUM DIPHOSPHATE ; CAS No. : 7320-34-5 )
Exposure route :	Inhalation



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Species : Rat  
Effective dose : > 1,1 mg/l  
Method : OECD 403

### Corrosion

Causes severe skin burns and eye damage. Rabbit's eye: no irritation. 2 % solution. Method : OECD 405.

### Respiratory or skin sensitisation

Based on available data, the classification criteria are not met. Guinea-pig: non-sensitizing (2 % solution). Method : OECD 406.

### 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.

### 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] as well as in-house investigations.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity

Harmful to aquatic life with long lasting effects.

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

Parameter :	LC50 ( TETRAPOTASSIUM DIPHOSPHATE ; CAS No. : 7320-34-5 )
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 100 mg/l
Exposure time :	96 h
Method :	OECD 203
Parameter :	LC50 ( DIMETHYLDIOCTYLAMMONIUMCHLORIDE ; CAS No. : 5538-94-3 )
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	0,35 mg/l
Exposure time :	96 h
Parameter :	LC50 ( DIMETHYLDIOCTYLAMMONIUMCHLORIDE ; CAS No. : 5538-94-3 )
Species :	Lepomis macrochirus (Bluegill)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	0,55 mg/l
Exposure time :	48 h
Parameter :	LC50 ( DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9 )

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Species : Poecilia reticulata (Guppy)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 2 mg/l  
Exposure time : 96 h  
Parameter : LC50 ( DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9 )  
Species : Oncorhynchus mykiss (Rainbow trout)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 2 mg/l  
Exposure time : 96 h  
Parameter : LC50 ( DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9 )  
Species : Danio rerio (zebrafish)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 10 - 100 mg/l  
Exposure time : 96 h  
Method : OECD 203  
Parameter : LC50 ( POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3 )  
Species : Gambusia affinis (Mosquito fish)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 80 mg/l  
Exposure time : 96 h  
Parameter : LC50 ( POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3 )  
Species : Poecilia reticulata (Guppy)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 165 mg/l  
Exposure time : 24 h

### Chronic (long-term) fish toxicity

Parameter : NOEC  
Species : Poecilia reticulata (Guppy)  
Evaluation parameter : Chronic (long-term) fish toxicity  
Effective dose : 1,1 mg/l  
Exposure time : 96 h  
Method : OECD 203

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

Parameter : EC50  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 1,1 mg/l  
Exposure time : 48 h  
Method : OECD 202

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

Parameter : NOEC  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : 0,26 mg/l  
Exposure time : 48 h  
Method : OECD 202

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

Parameter : ErC50  
Species : Desmodesmus subspicatus  
Evaluation parameter : Inhibition of growth rate  
Effective dose : 4,42 mg/l  
Exposure time : 72 h  
Method : OECD 201

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

Parameter : NOEC

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Species : Desmodesmus subspicatus  
Evaluation parameter : Chronic (long-term) algae toxicity  
Effective dose : 1,25 mg/l  
Exposure time : 96 h  
Method : OECD 201

### Toxicity to microorganisms

Parameter : EC50 ( TETRAPOTASSIUM DIPHOSPHATE ; CAS No. : 7320-34-5 )  
Evaluation parameter : Bacteria toxicity  
Effective dose : > 1000 mg/l  
Exposure time : 3 h  
Parameter : EC50 ( DIMETHYLDIOCTYLAMMONIUMCHLORIDE ; CAS No. : 5538-94-3 )  
Species : Bacteria toxicity  
Effective dose : 22 mg/l  
Exposure time : 3 h  
Method : OECD 209  
Parameter : EC50 ( DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9 )  
Evaluation parameter : Bacteria toxicity  
Effective dose : 7,75 mg/l  
Exposure time : 3 h  
Method : OECD 209  
Parameter : EC50 ( DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9 )  
Evaluation parameter : Bacteria toxicity  
Effective dose : 7,03 mg/l  
Exposure time : 21 h  
Method : OECD 209  
Parameter : EC50 ( POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3 )  
Evaluation parameter : Bacteria toxicity  
Effective dose : 22 mg/l  
Exposure time : 15 min

### Terrestrial toxicity

#### Toxicity to birds

##### Bird reproduction toxicity

Parameter : Bird reproduction toxicity ( DIMETHYLDIOCTYLAMMONIUMCHLORIDE ; CAS No. : 5538-94-3 )  
Species : Colinus virginianus (bobwhite quail)  
Evaluation parameter : Acute and subchronic bird toxicity  
Effective dose : 1300 ppm  
Exposure time : 192 h  
Parameter : Bird reproduction toxicity ( DIMETHYLDIOCTYLAMMONIUMCHLORIDE ; CAS No. : 5538-94-3 )  
Species : Anas platyrhynchos (maillard duck)  
Evaluation parameter : Acute and subchronic bird toxicity  
Effective dose : > 2500 ppm  
Exposure time : 192 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

The product is easily biodegradable according to OECD criteria. Method : OECD 301 D.

### 12.3 Bioaccumulative potential

No information available.

# Safety Data Sheet

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

Trade name : Orotol® plus Disinfection of suction systems  
Revision date : 04.01.2023  
Print date : 27.03.2023

Version (Revision) : 7.0.0 (6.0.1)

### 12.4 Mobility in soil

#### Distribution

There are no data available on the preparation itself.

### 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

UN 1719

### 14.2 UN proper shipping name

#### Land transport (ADR/RID)

CAUSTIC ALKALI LIQUID, N.O.S. ( DIMETHYLDIOCTYLAMMONIUMCHLORIDE · POTASSIUM HYDROXIDE )

#### Sea transport (IMDG)

CAUSTIC ALKALI LIQUID, N.O.S. ( DIMETHYLDIOCTYLAMMONIUMCHLORIDE · POTASSIUM HYDROXIDE )

#### Air transport (ICAO-TI / IATA-DGR)

CAUSTIC ALKALI LIQUID, N.O.S. ( DIMETHYLDIOCTYLAMMONIUMCHLORIDE · POTASSIUM HYDROXIDE )

### 14.3 Transport hazard class(es)

#### Land transport (ADR/RID)

Class(es) : 8  
Classification code : C5  
Hazard identification number (Kemler No.) : 80  
Tunnel restriction code : E  
Special Provisions : LQ 5 I · E 1  
Hazard label(s) : 8

#### Sea transport (IMDG)

Class(es) : 8  
EmS-No. : F-A / S-B  
Special Provisions : LQ 5 I · E 1 · IMDG-Code segregation group 18 - Alkalis  
Hazard label(s) : 8

#### Air transport (ICAO-TI / IATA-DGR)

# Safety Data Sheet

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

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Version (Revision) : 7.0.0 (6.0.1)

Class(es) : 8  
Special Provisions : E 1  
Hazard label(s) : 8

### 14.4 Packing group

III

### 14.5 Environmental hazards

Land transport (ADR/RID) : No  
Sea transport (IMDG) : No  
Air transport (ICAO-TI / IATA-DGR) : No

### 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)

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. Label elements · 03. Hazardous ingredients · 15. Restrictions on use

### 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

# Safety Data Sheet

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

**Trade name :** Orotol® plus Disinfection of suction systems  
**Revision date :** 04.01.2023  
**Print date :** 27.03.2023

**Version (Revision) :** 7.0.0 (6.0.1)

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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

### 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] as well as in-house investigations.

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

H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
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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# Safety Data Sheet

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

**Trade name :** MD 555 cleaner Special cleaner for suction system  
**Revision date :** 16.12.2022  
**Print date :** 16.12.2022

**Version (Revision) :** 4.0.0 (3.0.0)

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

#### 1.1 Product identifier

MD 555 cleaner Special cleaner for suction system  
Unique Formula Identifier : 3UYT-6YW2-6G0T-V1WT

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

##### Relevant identified uses

MD 555 cleaner is a non-foaming special cleaner for dental suction systems including drainage lines.

##### Products Category [PC]

PC 35 - Washing and cleaning products

##### 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 Irrit. 2 ; H319 - Serious eye damage/eye irritation : Category 2 ; Causes serious eye irritation.

##### 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



Exclamation mark (GHS07)

##### Signal word

Warning

# Safety Data Sheet

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

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### Hazard statements

H315 Causes skin irritation.  
H319 Causes serious eye 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

MD 555 contains organic and inorganic acids, foam-free surfactants, dyes and auxiliary agents in aqueous solution.

#### Hazardous ingredients

CITRIC ACID MONOHYDRATE ; REACH No. : 01-2119457026-42 ; EC No. : 201-069-1; CAS No. : 5949-29-1

Weight fraction :  $\geq 20 - < 25$  %  
Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319 STOT SE 3 ; H335

PHOSPHORIC ACID ; REACH No. : 01-2119485924-24 ; EC No. : 231-633-2; CAS No. : 7664-38-2

Weight fraction :  $\geq 15 - < 20$  %  
Classification 1272/2008 [CLP] : Met. Corr. 1 ; H290 Skin Corr. 1B ; H314 Eye Dam. 1 ; H318  
Specific Conc. Limits : Eye Dam. 1 ; H318: C  $\geq 25$  % • Skin Corr. 1B ; H314: C  $\geq 25$  % • Skin Corr. 1C ;  
H314: C  $\geq 25$  % • Eye Irrit. 2 ; H319: C  $\geq 10$  % • Skin Irrit. 2 ; H315: C  $\geq 10$  %

#### 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

Remove contaminated, saturated clothing immediately. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

#### Following inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician.

#### 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

If swallowed, immediately drink: Water Never give anything by mouth to an unconscious person or a person with cramps. Do NOT induce vomiting. Call a physician immediately.

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

Causes serious eye irritation. Causes skin irritation.

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

None



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### 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

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

##### For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

##### Other information

Treat the recovered material as prescribed in the section on waste disposal.

#### 6.4 Reference to other sections

None

### 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. Handle and open container with care. Provide adequate ventilation. Do not breathe vapour/aerosol.

##### 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.

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### 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

#### Occupational exposure limit values

PHOSPHORIC ACID ; CAS No. : 7664-38-2

Limit value type (country of origin) : STEL ( EC )

Limit value : 2 mg/m<sup>3</sup>

Version : 20.06.2019

Limit value type (country of origin) : TWA ( EC )

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

Version : 20.06.2019

Limit value type (country of origin) : TLV/STEL ( EC )

Limit value : 2 mg/m<sup>3</sup>

Version :

Limit value type (country of origin) : TLV/TWA ( EC )

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

Version :

Limit value type (country of origin) : TLV/STEL ( GB )

Limit value : 2 mg/m<sup>3</sup>

Version :

Limit value type (country of origin) : TLV/TWA ( GB )

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

Version :

#### DNEL-/PNEC-values

There are no data available on the preparation itself.

##### DNEL/DMEL

PHOSPHORIC ACID ; CAS No. : 7664-38-2

Limit value type : DNEL Consumer (local)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 0,73 mg/m<sup>3</sup>

Limit value type : DNEL worker (local)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 2,92 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

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

##### PNEC

CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1

Limit value type : PNEC (Aquatic, freshwater)

Limit value : 0,44 mg/l

Limit value type : PNEC (Aquatic, marine water)

Limit value : 0,044 mg/l

Limit value type : PNEC (Sediment, freshwater)

Limit value : 3,46 mg/kg

Limit value type : PNEC (Sediment, marine water)

# Safety Data Sheet

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Limit value : 34,6 mg/kg  
Limit value type : PNEC (Soil)  
Limit value : 33,1 mg/kg  
Limit value type : PNEC (Sewage treatment plant)  
Limit value : > 1000 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

Usually no personal respirative protection necessary.

#### General information

Keep away from food, drink and animal feedingstuffs. Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing. 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 :** light red

**Odour :** odourless

#### Safety characteristics

<b>Melting point/freezing point :</b>	( 1013 hPa )		No data available
<b>Initial boiling point and boiling range :</b>	( 1013 hPa )	approx.	100 °C
<b>Decomposition temperature :</b>	( 1013 hPa )		not applicable
<b>Flash point :</b>			not applicable
<b>Auto-ignition temperature :</b>			not applicable
<b>Lower explosion limit :</b>			not applicable
<b>Upper explosion limit :</b>			not applicable
<b>Vapour pressure :</b>	( 50 °C )		No data available
<b>Density :</b>	( 20 °C )	approx.	1,2 g/cm <sup>3</sup>
<b>Solvent separation test :</b>	( 20 °C )	<	3 %
<b>Water solubility :</b>	( 20 °C )		100 Weight-%
<b>pH value :</b>	( 20 °C / 50 g/l )		1,5 - 2,5
<b>pH value :</b>	( 20 °C / 100 g/l )	<	1
<b>log P O/W :</b>			No data available
<b>Flow time :</b>	( 20 °C )	<	12 s DIN-cup 4 mm
<b>Odour threshold :</b>			not applicable
<b>Maximum VOC content (EC) :</b>			0 Weight-%

# Safety Data Sheet

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**Oxidising liquids :** Not applicable.  
**Explosive properties :** Not applicable.  
**Corrosive to metals :** 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). Exothermic reaction with alkalis.

### 10.3 Possibility of hazardous reactions

Exothermic reaction with alkalis.

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials

Alkali (lye), concentrated.

### 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 calculated
Exposure route :	Oral
Effective dose :	not relevant
Parameter :	LD50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )
Exposure route :	Oral
Species :	Rat
Effective dose :	1530 mg/kg
Parameter :	LD50 ( CITRIC ACID ; CAS No. : 77-92-9 )
Exposure route :	Oral
Species :	Rat
Effective dose :	9999,99 mg/kg

#### Practical experience/human evidence

Eye contact: irritation.

#### Acute dermal toxicity

Parameter :	ATEmix calculated
Exposure route :	Dermal
Effective dose :	not relevant
Parameter :	LD50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	2740 mg/kg

#### Acute inhalation toxicity

Parameter :	ATEmix calculated
Exposure route :	Inhalation (vapour)
Effective dose :	not relevant

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Parameter : LD50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Exposure route : Inhalation  
Species : Rabbit  
Effective dose : 1,689 mg/l

### Corrosion

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/eye irritation

Causes serious eye irritation.

### Respiratory or skin sensitisation

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

### 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.

### 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

Parameter : LC50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Species : Fish  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 3 - 3,5 mg/l  
Exposure time : 96 h

Parameter : LC0 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Species : Fish  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : 100 - 1000 mg/l

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

Parameter : EC50 ( PHOSPHORIC ACID ; CAS No. : 7664-38-2 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 100 mg/l  
Method : OECD 202

# Safety Data Sheet

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**Print date :** 16.12.2022

**Version (Revision) :** 4.0.0 (3.0.0)

### Toxicity to microorganisms

Parameter : EC0 ( CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1 )  
Evaluation parameter : Bacteria toxicity  
Effective dose : 10000 mg/l

### 12.2 Persistence and degradability

#### Abiotic degradation

No data available.

#### Biodegradation

The surfactants contained in this mixture comply with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.

### 12.3 Bioaccumulative potential

No information available.

### 12.4 Mobility in soil

#### Distribution

There are no data available on the preparation itself.

### 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: 20 01 14\* acids.

## 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.

# Safety Data Sheet

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

Trade name : MD 555 cleaner Special cleaner for suction system  
Revision date : 16.12.2022  
Print date : 16.12.2022

Version (Revision) : 4.0.0 (3.0.0)

### 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)

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

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) · 14. Transport hazard class(es) - Land transport (ADR/RID) · 14. Transport hazard class(es) - Sea transport (IMDG) · 14. Transport hazard class(es) - Air transport (ICAO-TI / IATA-DGR) · 15. Restrictions on use

### 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

# Safety Data Sheet

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**Trade name :** MD 555 cleaner Special cleaner for suction system  
**Revision date :** 16.12.2022  
**Print date :** 16.12.2022

**Version (Revision) :** 4.0.0 (3.0.0)

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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

### 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)

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

### 16.6 Training advice

None

### 16.7 Additional information

Follow the instructions for use on the label.

---

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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# Safety Data Sheet

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

Trade name : MD 550 Mundspülbecken-Reiniger  
Revision date : 02.01.2023  
Print date : 27.02.2023

Version (Revision) : 7.1.0 (7.0.0)

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

#### 1.1 Product identifier

MD 550 Mundspülbecken-Reiniger  
Unique Formula Identifier : 0J7C-SUMH-8G05-90AJ

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

##### Relevant identified uses

MD 550 is a special, ready-to-use, antibacterial preparation that cleans and cares for spittoon bowls of dental units.

##### Products Category [PC]

PC 35 - Washing and cleaning products

##### 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]

Flam. Liq. 3 ; H226 - Flammable liquids : Category 3 ; Flammable liquid and vapour.

Eye Irrit. 2 ; H319 - Serious eye damage/eye irritation : Category 2 ; Causes serious eye irritation.

#### 2.2 Label elements

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

##### Hazard pictograms



Flame (GHS02) · Exclamation mark (GHS07)

##### Signal word

Warning

##### Hazard statements

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

# Safety Data Sheet

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

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### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280 Wear protective gloves and eye/face protection.  
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 contains < 0.1 % substances with potential 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

MD 550 contains alcohols, non-ionic surfactants, organic acids, benzylsalicylate, fragrances and auxiliary agents in aqueous solution.

#### Hazardous ingredients

ETHANOL ; REACH No. : 01-2119457610-43 ; EC No. : 200-578-6; CAS No. : 64-17-5

Weight fraction :  $\geq 40 - < 45$  %  
Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319  
Specific Conc. Limits : Eye Irrit. 2 ; H319: C  $\geq 50$  %

CITRIC ACID MONOHYDRATE ; REACH No. : 01-2119457026-42 ; EC No. : 201-069-1; CAS No. : 5949-29-1

Weight fraction :  $\geq 3 - < 8$  %  
Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319 STOT SE 3 ; H335

PROPAN-2-OL ; REACH No. : 01-2119457558-25 ; EC No. : 200-661-7; CAS No. : 67-63-0

Weight fraction :  $\geq 1 - < 5$  %  
Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319 STOT SE 3 ; H336

BENZYL SALICYLATE ; REACH No. : 01-2119969442-31 ; EC No. : 204-262-9; CAS No. : 118-58-1

Weight fraction :  $< 0,1$  %  
Classification 1272/2008 [CLP] : Skin Sens. 1B ; H317 Eye Irrit. 2 ; H319 Aquatic Chronic 3 ; H412

#### 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

Provide fresh air. In case of respiratory tract irritation, consult a physician.

#### 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

If swallowed, immediately drink: Water Never give anything by mouth to an unconscious person or a person with cramps. Do NOT induce vomiting. Call a physician immediately.

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

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Causes serious eye 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

#### Unsuitable extinguishing media

Full water jet

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

None known.

#### Hazardous combustion products

Vapours can form explosive mixtures with air.

### 5.3 Advice for firefighters

Cool endangered containers with water in case of fire.

#### Special protective equipment for firefighters

In case of fire: Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

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

Use personal protection equipment. Remove all sources of ignition. When using do not smoke. 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

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

#### For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

#### Other information

Treat the recovered material as prescribed in the section on waste disposal.

### 6.4 Reference to other sections

None

## 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. Handle and open container with care. Keep away from sources of ignition - No smoking. Provide adequate ventilation. Do not breathe vapour/aerosol.

#### Protective measures

##### Measures to prevent fire

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Usual measures for fire prevention. Keep away from sources of ignition - No smoking.

### 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

Do not store together with oxidizing, self-igniting substances and highly flammable solid substances. Store the foodstuffs separately.

### 7.3 Specific end use(s)

None

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limit values

ETHANOL ; CAS No. : 64-17-5

Limit value type (country of origin) : TLV/TWA ( GB )

Limit value : 1000 ppm / 1920 mg/m<sup>3</sup>

PROPAN-2-OL ; CAS No. : 67-63-0

Limit value type (country of origin) : TLV/STEL ( GB )

Limit value : 500 ppm / 1250 mg/m<sup>3</sup>

Limit value type (country of origin) : TLV/TWA ( GB )

Limit value : 400 ppm / 999 mg/m<sup>3</sup>

#### DNEL-/PNEC-values

There are no data available on the preparation itself.

#### DNEL/DMEL

ETHANOL ; CAS No. : 64-17-5

Limit value type : DNEL Consumer (local)

Exposure route : Inhalation

Exposure frequency : Short-term

Limit value : 950 mg/m<sup>3</sup>

Limit value type : DNEL Consumer (systemic)

Exposure route : Oral

Exposure frequency : Long-term

Limit value : 87 mg/kg

Assessment factor : 24 h

Limit value type : DNEL Consumer (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 206 mg/kg

Assessment factor : 24 h

Limit value type : DNEL Consumer (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 114 mg/m<sup>3</sup>

Limit value type : DNEL worker (local)

Exposure route : Inhalation

Exposure frequency : Short-term

Limit value : 1900 mg/m<sup>3</sup>

Limit value type : DNEL worker (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 343 mg/kg

Assessment factor : 24 h

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**Version (Revision) :** 7.1.0 (7.0.0)

Limit value type : DNEL worker (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 950 mg/m<sup>3</sup>

PROPAN-2-OL ; CAS No. : 67-63-0

Limit value type : DNEL Consumer (systemic)  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 319 mg/kg  
Assessment factor : 24 h

Limit value type : DNEL Consumer (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 89 mg/m<sup>3</sup>

Limit value type : DNEL Consumer (systemic)  
Exposure route : Oral  
Exposure frequency : Long-term  
Limit value : 26 mg/kg  
Assessment factor : 24 h

Limit value type : DNEL worker (systemic)  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 888 mg/kg  
Assessment factor : 24 h

Limit value type : DNEL worker (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 500 mg/m<sup>3</sup>

### PNEC

ETHANOL ; CAS No. : 64-17-5

Limit value type : PNEC (Aquatic, freshwater)  
Limit value : 0,96 mg/l  
Limit value type : PNEC (Aquatic, marine water)  
Limit value : 0,79 mg/l

Limit value type : PNEC (Industrial)  
Exposure route : Soil  
Limit value : 0,63 mg/kg

Limit value type : PNEC (Sediment, freshwater)  
Limit value : 3,6 mg/kg  
Limit value type : PNEC (Sediment, marine water)  
Limit value : 2,9 mg/kg

Limit value type : PNEC (Secondary poisoning)  
Limit value : 729 mg/kg  
Limit value type : PNEC (Sewage treatment plant)  
Limit value : 580 mg/l

CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1

Limit value type : PNEC (Aquatic, freshwater)  
Limit value : 0,44 mg/l  
Limit value type : PNEC (Aquatic, marine water)  
Limit value : 0,044 mg/l

Limit value type : PNEC (Sediment, freshwater)  
Limit value : 3,46 mg/kg  
Limit value type : PNEC (Sediment, marine water)  
Limit value : 34,6 mg/kg  
Limit value type : PNEC (Soil)

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Limit value : 33,1 mg/kg  
Limit value type : PNEC (Sewage treatment plant)  
Limit value : > 1000 mg/l  
PROPAN-2-OL ; CAS No. : 67-63-0  
Limit value type : PNEC (Aquatic, freshwater)  
Limit value : 140,9 mg/l  
Limit value type : PNEC (Aquatic, marine water)  
Limit value : 140,9 mg/l  
Limit value type : PNEC (Industrial)  
Exposure route : Soil  
Limit value : 28 mg/kg  
Limit value type : PNEC (Sediment, freshwater)  
Limit value : 552 mg/kg  
Limit value type : PNEC (Sediment, marine water)  
Limit value : 552 mg/kg  
Limit value type : PNEC (Secondary poisoning)  
Limit value : 160 mg/kg  
Limit value type : PNEC (Sewage treatment plant)  
Limit value : 2251 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

Usually no personal respiratory protection necessary.

#### General information

Keep away from food, drink and animal feedingstuffs. Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing. 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 :** colourless

**Odour :** Alcohol

#### Safety characteristics

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

**Initial boiling point and boiling range :** ( 1013 hPa ) approx. 95 °C

# Safety Data Sheet

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<b>Decomposition temperature :</b>	( 1013 hPa )		not determined		
<b>Flash point :</b>			23	°C	
<b>Auto-ignition temperature :</b>			425	°C	
<b>Lower explosion limit :</b>			3,5	Vol-%	
<b>Upper explosion limit :</b>			15	Vol-%	
<b>Vapour pressure :</b>	( 50 °C )	approx.	160	hPa	
<b>Density :</b>	( 20 °C )	approx.	0,94	g/cm <sup>3</sup>	
<b>Solvent separation test :</b>	( 20 °C )	<	3	%	
<b>Water solubility :</b>	( 20 °C )		100	Weight-%	
<b>pH value :</b>			2,1 - 3		
<b>log P O/W :</b>			not determined		
<b>Flow time :</b>	( 20 °C )	<	20	s	DIN-cup 4 mm
<b>Odour threshold :</b>			not determined		
<b>Maximum VOC content (EC) :</b>			42,8	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

Vapours can form explosive mixtures with air.

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials

Oxidizing agent.

### 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 :	not relevant
Parameter :	LD50 ( FATTY ALCOHOL ALKOXYLATE ; CAS No. : 111905-53-4 )
Exposure route :	Oral
Species :	Rat
Effective dose :	> 300 - 2000 mg/kg
Parameter :	LD50 ( CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1 )
Exposure route :	Oral
Species :	Mouse
Effective dose :	5400 mg/kg
Method :	OECD 401

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Parameter : LD50 ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 10470 mg/kg  
Method : OECD 401  
Parameter : LD50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 5280 mg/kg  
Parameter : LD50 ( HYDROXYETHYL CELLULOSE, CATIONIC ; CAS No. : 68610-92-4 )  
Exposure route : Oral  
Species : Rat  
Effective dose : > 10000 mg/kg  
Parameter : LD50 ( BENZYL SALICYLATE ; CAS No. : 118-58-1 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 2227 mg/kg  
Parameter : LD50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 5840 mg/kg  
Method : OECD 401  
Parameter : LD50 ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Oral  
Species : Rabbit  
Effective dose : 6300 mg/kg

### Acute dermal toxicity

Parameter : ATEmix  
Exposure route : Dermal  
Effective dose : not relevant  
Parameter : LD50 ( HYDROXYETHYL CELLULOSE, CATIONIC ; CAS No. : 68610-92-4 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : > 4000 mg/kg  
Parameter : LD50 ( BENZYL SALICYLATE ; CAS No. : 118-58-1 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 14150 mg/kg  
Parameter : LD50 ( CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1 )  
Exposure route : Dermal  
Species : Rat  
Effective dose : > 2000 mg/kg  
Method : OECD 402  
Parameter : LD50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 12800 mg/kg  
Parameter : LD50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 13900 mg/kg  
Method : OECD 402  
Parameter : LD50 ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Dermal  
Species : Rabbit



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Effective dose : 20 g/kg

### Acute inhalation toxicity

Parameter : ATEmix  
Exposure route : Inhalation (vapour)  
Effective dose : not relevant  
Parameter : LC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Exposure route : Inhalation  
Species : Mouse  
Effective dose : 27,2 mg/l  
Exposure time : 4 h  
Parameter : LC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : > 25 mg/l  
Exposure time : 6 h  
Method : OECD 403  
Parameter : LC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 72,6 mg/l  
Exposure time : 4 h  
Parameter : LC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Exposure route : Inhalation (vapour)  
Species : Rat  
Effective dose : > 10000 ppm  
Exposure time : 6 h  
Parameter : LC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 125 mg/l  
Exposure time : 4 h  
Method : OECD 403  
Parameter : LD50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Exposure route : Inhalation (vapour)  
Species : Rat  
Effective dose : 47,5 mg/l

### Corrosion

#### Skin corrosion/irritation

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

#### Serious eye damage/eye irritation

Causes serious eye irritation.

### 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) ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Oral  
Species : Rat  
Effective dose : 1730 mg/kg  
Exposure time : 24 h  
Method : OECD 408

#### Subacute inhalation toxicity

Parameter : NOAEL(C) ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Inhalation

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Species : Rat  
Effective dose : > 20 mg/l

### 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.

### 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 contains < 0.1 % substances with potential 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

Parameter :	LC50 ( ETHANOL ; CAS No. : 64-17-5 )
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	11200 mg/l
Parameter :	LC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )
Species :	Pimephales promelas (fathead minnow)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	9640 mg/l
Exposure time :	96 h
Parameter :	LC50 ( CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1 )
Species :	Leuciscus idus (golden orfe)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	440 mg/l
Exposure time :	48 h
Method :	OECD 203
Parameter :	LC50 ( FATTY ALCOHOL ALKOXYLATE ; CAS No. : 111905-53-4 )
Species :	Leuciscus idus (golden orfe)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 1 - 10 mg/l
Exposure time :	48 h
Parameter :	LC50 ( HYDROXYETHYL CELLULOSE, CATIONIC ; CAS No. : 68610-92-4 )
Species :	Pimephales promelas (fathead minnow)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	2,4 - 3,7 mg/l
Exposure time :	96 h

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Parameter : LC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Leuciscus idus (golden orfe)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 100 mg/l  
Exposure time : 48 h  
Parameter : LC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Pimephales promelas (fathead minnow)  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 15000 mg/l  
Exposure time : 96 h

### Chronic (long-term) fish toxicity

Parameter : NOEC ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Ceriodaphnia spec  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 9,6 mg/l

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

Parameter : EC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 9200 - 14300 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 13299 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( FATTY ALCOHOL ALKOXYLATE ; CAS No. : 111905-53-4 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 1 - 10 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( HYDROXYETHYL CELLULOSE, CATIONIC ; CAS No. : 68610-92-4 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 34 - 48 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 120 mg/l  
Exposure time : 72 h  
Parameter : EC50 ( CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 1535 mg/l  
Exposure time : 48 h  
Parameter : EC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 9714 mg/l  
Exposure time : 24 h  
Parameter : EC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : > 100 mg/l

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Exposure time : 48 h  
Parameter : EC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Ceriodaphnia spec  
Evaluation parameter : Acute (short-term) daphnia toxicity  
Effective dose : 1806 mg/l

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

Parameter : NOEC ( FATTY ALCOHOL ALKOXYLATE ; CAS No. : 111905-53-4 )  
Species : Daphnia magna (Big water flea)  
Evaluation parameter : Chronic (long-term) daphnia toxicity  
Effective dose : > 0,1 - 1 mg/l

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

Parameter : EC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Pseudokirchneriella subcapitata  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 1000 mg/l  
Exposure time : 72 h

Parameter : EC50 ( FATTY ALCOHOL ALKOXYLATE ; CAS No. : 111905-53-4 )  
Species : Algae  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 0,1 - 1 mg/l  
Exposure time : 72 h

Parameter : EC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Scenedesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 100 mg/l  
Exposure time : 72 h

Parameter : EC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Algae  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 1800 mg/l  
Exposure time : 168 h

Parameter : EC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Chlorella vulgaris  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 275 mg/l

Parameter : EC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Selenastrum capricornutum  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : 440 mg/l

Parameter : IC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Scenedesmus subspicatus  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 100 mg/l

Parameter : ErC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Pseudokirchneriella subcapitata  
Evaluation parameter : Acute (short-term) algae toxicity  
Effective dose : > 4800 mg/l  
Exposure time : 72 h  
Method : OECD 201

### Toxicity to microorganisms

Parameter : Bacteria toxicity ( FATTY ALCOHOL ALKOXYLATE ; CAS No. : 111905-53-4 )  
Species : Bacteria toxicity  
Effective dose : > 1000 mg/l

Parameter : EC50 ( HYDROXYETHYL CELLULOSE, CATIONIC ; CAS No. : 68610-92-4 )  
Evaluation parameter : Bacteria toxicity

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Effective dose : 2500 mg/l  
Exposure time : 16 h  
Parameter : EC50 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Evaluation parameter : Bacteria toxicity  
Effective dose : > 100 mg/l  
Parameter : EC0 ( CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1 )  
Evaluation parameter : Bacteria toxicity  
Effective dose : 10000 mg/l  
Parameter : EC10 ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Species : Pseudomonas putida  
Evaluation parameter : Bacteria toxicity  
Effective dose : 5175 mg/l  
Exposure time : 18 h

### Sewage treatment plant

Parameter : EC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Inoculum : Effects in sewage plants  
Effective dose : 5800 mg/l  
Exposure time : 4 h

## 12.2 Persistence and degradability

### Abiotic degradation

No data available.

### Biodegradation

Parameter : Biodegradation ( PROPAN-2-OL ; CAS No. : 67-63-0 )  
Inoculum : Degree of elimination  
Evaluation parameter : Aerobic  
Degradation rate : > 95 %  
Method : OECD 301E

All active agents are biodegradable at the dilution rates arising in the sewage system. The organic ingredients are biodegradable at the dilution rates arising in the sewage system.

## 12.3 Bioaccumulative potential

No information available.

## 12.4 Mobility in soil

### Distribution

There are no data available on the preparation itself.

## 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 contains < 0.1 % substances with potential 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

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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: 07 06 04\* other organic solvents.

## SECTION 14: Transport information

### 14.1 UN number

UN 1170

### 14.2 UN proper shipping name

#### Land transport (ADR/RID)

ETHANOL, SOLUTION

#### Sea transport (IMDG)

ETHANOL, SOLUTION

#### Air transport (ICAO-TI / IATA-DGR)

ETHANOL, SOLUTION

### 14.3 Transport hazard class(es)

#### Land transport (ADR/RID)

Class(es) : 3  
Classification code : F1  
Hazard identification number (Kemler No.) : 30  
Tunnel restriction code : D/E  
Special Provisions : LQ 5 | · E 1  
Hazard label(s) : 3

#### Sea transport (IMDG)

Class(es) : 3  
EmS-No. : F-E / S-D  
Special Provisions : LQ 5 | · E 1  
Hazard label(s) : 3

#### Air transport (ICAO-TI / IATA-DGR)

Class(es) : 3  
Special Provisions : E 1  
Hazard label(s) : 3

### 14.4 Packing group

III

### 14.5 Environmental hazards

Land transport (ADR/RID) : No

Sea transport (IMDG) : No

Air transport (ICAO-TI / IATA-DGR) : No

### 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

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### Restrictions on use

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

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

15. Restrictions on use

### 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)

H225	Highly flammable liquid and vapour.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful 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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