Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)

Trade name :	Orotol® plus Disinfection of suction systems		
Revision date :	13.11.2012	**Version :**	1.0.0
Date of print :	22.11.2012		

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Orotol® plus Disinfection of suction systems

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.

Product categories

PC0 - 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 (manufacturer/importer/only representative/downstream user/distributor)

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 AG, Postfach 1264, D-74302 Bietigheim-Bissingen
Phone No.: +49 7142 705-0, Telefax No.: +49 7142 61365, info@duerr.de
in Great Britain:
DÜRR DENTAL [Products] UK Ltd., 14 Linnell Way - Telford Way Industrial Estate, GB-Kettering Northants NN16 8PS
Phone No.: +44 1536 526740, Telefax No.: +44 1536 526749, info@duerruk.com

1.4 Emergency Telephone Number

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

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC

Risk of serious damage to eyes. · Irritating to skin.
Xi ; R 41 · Xi ; R 38

2.2 Label elements

Labelling (67/548/EEC or 1999/45/EC)

Hazard symbols and hazard statements of dangerous substances and preparations


Xi ; Irritant

R-phrases

41	Risk of serious damage to eyes.
38	Irritating to skin.

S-phrases

37/39	Wear suitable gloves and eye/face protection.

28	After contact with skin, wash immediately with plenty of water.
26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice .
24/25	Avoid contact with skin and eyes.

2.3 Other hazards

None

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

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

Weight fraction :	5 - 10 %
Classification 67/548/EEC :	Xi ; R36
Classification 1272/2008 [CLP] :	Eye Irrit. 2 ; H319

DIOCTYL-DIMETHYL AMMONIUM CHLORIDE ; REACH registration No. : - ; EC No : 226-901-0; CAS No. : 5538-94-3

Weight fraction :	1 - 5 %
Classification 67/548/EEC :	N ; R50 C ; R34 Xn ; R22
Classification 1272/2008 [CLP] :	Skin Corr. 1B ; H314 Acute Tox. 4 ; H302 Aquatic Acute 1 ; H400

SODIUM ETHYLENEDIAMINETETRAACETATE ; REACH registration No. : 01-2119486762-27 ; EC No : 200-573-9; CAS No. : 64-02-8

Weight fraction :	1 - 5 %
Classification 67/548/EEC :	Xi ; R41 Xn ; R20/22
Classification 1272/2008 [CLP] :	Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Acute Tox. 4 ; H332

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

Weight fraction :	0,5 - 1 %
Classification 67/548/EEC :	N ; R50 C ; R34 Xn ; R22
Classification 1272/2008 [CLP] :	Skin Corr. 1B ; H314 Acute Tox. 4 ; H302 Aquatic Acute 1 ; H400

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

Weight fraction :	0,5 - 2 %
Classification 67/548/EEC :	C ; R35 Xn ; R22
Classification 1272/2008 [CLP] :	Met. Corr. 1 ; H290 Skin Corr. 1A ; H314 Acute Tox. 4 ; H302

Additional information

Full text of R-, H- and EUH-phrases: see section 16.

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).

After 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.

After ingestion

If swallowed, mmediately drink: Water. Do not induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

None

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2). Extinguishing powder. Water spray. Water mist. The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power 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.

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 protective 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 (e.g. 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

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. Open and handle container with care. Provide adequate ventilation. Do not breathe aerosol.

Protective measures

Fire prevent measures

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. Keep in a cool, well-ventilated place. Do not store in temperatures below 5 °C.

Hints on storage assembly

Store the foodstuffs separately.

7.3 Specific end use(s)

None

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^3

DNEL/DMEL and PNEC values

There are no data available on the preparation itself.

DNEL/DMEL

Limit value type :	DNEL/DMEL (Consumer) (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Exposure route :	Inhalation
Exposure frequency :	Long Term (repeated)
Limit value :	1,5 mg/m^3
Limit value type :	DNEL/DMEL (Consumer) (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Exposure route :	Inhalation
Exposure frequency :	Short term (acute)
Limit value :	1,5 mg/m^3
Limit value type :	DNEL/DMEL (Consumer) (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Exposure route :	Oral
Exposure frequency :	Long Term (repeated)
Limit value :	25 mg/kg
Safety factor :	24 kg/h
Limit value type :	DNEL/DMEL (Industrial) (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Exposure route :	Inhalation
Exposure frequency :	Long Term (repeated)
Limit value :	2,5 mg/m^3
Limit value type :	DNEL/DMEL (Industrial) (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Exposure route :	Inhalation
Exposure frequency :	Short term (acute)
Limit value :	2,5 mg/m^3

PNEC

Limit value type :	PNEC (Industrial) (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Exposure route :	Water (Including sewage plant)
Limit value :	2,2 mg/l
Limit value type :	PNEC (Industrial) (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Exposure route :	Water (Including sewage plant)
Limit value :	0,22 mg/l

Limit value type :	PNEC (Industrial) (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Exposure route :	Soil
Limit value :	0,72 mg/kg
Limit value type :	PNEC (Industrial) (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Exposure route :	Water (Including sewage plant)
Limit value :	43 mg/l

8.2 Exposure controls

Personal protective equipment

Eye / face protection

Eye glasses with side protection DIN 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 health and safety measures

Keep away from food, drink and animal feeding stuffs. 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.

Occupational exposure controls

Technical measures to prevent exposure

Provide adequate ventilation.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : liquid

Colour : clear yellow

Odour

mild aromatic fresh

Safety relevant basis data

Melting point / melting range :	(1013 hPa)		no data available		
Boiling temperature/boiling range:	(1013 hPa)	ca.	100	°C	
Flash point :			not applicable		DIN 51755
Ignition temperature :			not applicable		
Lower explosion limit :			not applicable		
Upper explosion limit :			not applicable		
Density :	(20 °C)		1,07 - 1,11	g/cm^3	
Water solubility :	(20 °C)		100	Wt %	
pH value :	(20 °C / 20 g/l)		10 - 11		

9.2 Other information

None

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
No information available.

10.6 Hazardous decomposition products
None known.

11. Toxicological information

11.1 Information on toxicological effects

Acute effects

Acute oral toxicity

Parameter :	LD50
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg

Methode : OECD 401. - OECD 402.

Practical experience / human evidence

The product has an irritating effect on eyes and skin.

Acute dermal toxicity

Parameter :	LD50
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 2000 mg/kg

Irritant and corrosive effects
Rabbit skin: non-irritant (2 % solution). Methode : OECD 405.

Sensitisation
Guinea-pig: non-sensitizing. Methode : OECD 406.

11.4 Additional information
The product was classified in toxicological terms on the basis of the results of the calculation procedure outlined within General Directive on Preparations (1999/45/EC) as well as to our own test reports.

12. Ecological information

12.1 Toxicity

Aquatic toxicity
There are no data available on the preparation itself.

Acute (short-term) fish toxicity

Parameter :	LC50 (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Species :	Lepomis macrochirus (Bluegill)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 1000 mg/l
Exposure time :	96 h
Parameter :	LC50 (DIOCTYL-DIMETHYL AMMONIUM CHLORIDE ; 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 (DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9)
Species : Pimephales promelas (fathead minnow)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 0,28 mg/l
Exposure time : 96 h
Parameter : LC50 (DIOCTYL-DIMETHYL AMMONIUM CHLORIDE ; 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

Chronic (long-term) fish toxicity

Parameter : NOEC (DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9)
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) daphnia toxicity

Parameter : EC50 (SODIUM ETHYLENEDIAMINETETRAACETATE ; CAS No. : 64-02-8)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : 140 mg/l
Exposure time : 48 h
Parameter : EC50 (DIOCTYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 5538-94-3)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : > 0,1 - 1 mg/l
Exposure time : 72 h
Parameter : EC50 (DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : 0,016 mg/l
Exposure time : 48 h

Chronic (long-term) daphnia toxicity

Parameter : NOEC (DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Chronic (long-term) daphnia toxicity
Effective dose : 0,0042 mg/l
Exposure time : 504 h

Acute (short-term) algae toxicity

Parameter : IC50 (DIOCTYL-DIMETHYL AMMONIUM CHLORIDE ; CAS No. : 5538-94-3)
Species : Acute (short-term) algae toxicity
Evaluation parameter : Acute (short-term) algae toxicity
Effective dose : > 0,1 - 1 mg/l
Exposure time : 72 h
Parameter : ErC50 (DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE ; CAS No. : 85409-22-9)
Species : Pseudokirchneriella subcapitata
Effective dose : 0,049 mg/l
Exposure time : 72 h

Effects in sewage plants

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.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

There are no data available on the preparation itself.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

No information available.

12.7 Further ecological information

Prevent from flowing into surface water/ground water.

13. Disposal considerations

13.1 Waste treatment methods

Product/Packaging disposal

Waste codes / waste designations according to EWC / AVV

Waste code product

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

Waste treatment options

Appropriate disposal / Product

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

Appropriate disposal / Package

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

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. (DIOCTYL-DIMETHYL AMMONIUM CHLORIDE · POTASSIUM HYDROXIDE)

Sea transport (IMDG)

CAUSTIC ALKALI LIQUID, N.O.S. (DIOCTYL-DIMETHYL AMMONIUM CHLORIDE · POTASSIUM HYDROXIDE)

Air transport (ICAO-TI / IATA-DGR)

CAUSTIC ALKALI LIQUID, N.O.S. (DIOCTYL-DIMETHYL AMMONIUM CHLORIDE · 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 l · LQ 7 · E 1

Hazard label(s) : 8

Sea transport (IMDG)
Class(es) : 8
EmS-No : F-A / S-B
Special provisions : LQ 5 l · E 1
Hazard label(s) : 8

Air transport (ICAO-TI / IATA-DGR)
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

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
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 substance a chemical safety assessment has not been carried out.

16. Other information

16.1 Indication of changes
None

16.2 Abbreviations and acronyms
None

16.3 Key literature references and sources for data
None

16.4 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Eye Dam. 1 ; H318 - Serious eye damage/eye irritation : Category 1 ; Causes serious eye damage.
Skin Irrit. 2 ; H315 - Skin corrosion/irritation : Category 2 ; Causes skin irritation.
Met. Corr. 1 ; H290 - Corrosive to metals : Category 1 ; May be corrosive to metals.

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

Corrosion (GHS05)

Signal word

Danger

Hazard Statements

H290	May be corrosive to metals.
H318	Causes serious eye damage.
H315	Causes skin irritation.

Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P333/313	If skin irritation or rash occurs: Get medical advice/attention.
P305/351/338	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/shower.
P403/233	Store in a well-ventilated place. Keep container tightly closed.

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

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
20/22	Harmful by inhalation and if swallowed.
22	Harmful if swallowed.
34	Causes burns.
35	Causes severe burns.
36	Irritating to eyes.
38	Irritating to skin.
41	Risk of serious damage to eyes.
50	Very toxic to aquatic organisms.

16.6 Training advice

None

16.7 Additional information

Notice the directions for use on the label.
Dr. Klaus-Michael Wolf Tel. No.: +49 7154 1308-27 · Fax. No.: +49 7154 1308-40 · info@orochemie.de
Dipl. Ing. Elisabeth Gehring Tel. No.: +49 7154 1308-37

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.

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)

Trade name :	MD 550 Spittoon bowl cleaner		
Revision date :	12.11.2012	**Version :**	1.0.0
Date of print :	22.11.2012		

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
MD 550 Spittoon bowl cleaner

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.

Product categories

PC35 - Washing and cleaning products (including solvent based 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 (manufacturer/importer/only representative/downstream user/distributor)
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 AG, Postfach 1264, D-74302 Bietigheim-Bissingen
Phone No.: +49 7142 705-0, Telefax No.: +49 7142 61365, info@duerr.de
in Great Britain:
DÜRR DENTAL [Products] UK Ltd., 14 Linnell Way - Telford Way Industrial Estate, GB-Kettering Northants NN16 8PS
Phone No.: +44 1536 526740, Telefax No.: +44 1536 526749, info@duerruk.com

1.4 Emergency Telephone Number
INT: +49 6132 84463 (24 h/7 d)

2. Hazards identification

2.1 Classification of the substance or mixture
Classification according to Directive 67/548/EEC or 1999/45/EC
Flammable.

R 10

2.2 Label elements
Labelling (67/548/EEC or 1999/45/EC)
R-phrases

10	Flammable.

S-phrases

37	Wear suitable gloves.
26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice .
16	Keep away from sources of ignition - No smoking.
24/25	Avoid contact with skin and eyes.

2.3 Other hazards
None

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

Weight fraction :	40 - 45 %
Classification 67/548/EEC :	F ; R11
Classification 1272/2008 [CLP] :	Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319

CITRIC ACID MONOHYDRATE ; REACH registration No. : 02-2119773813-30 ; EC No : 201-069-1; CAS No. : 5949-29-1

Weight fraction :	5 - 10 %
Classification 67/548/EEC :	Xi ; R36
Classification 1272/2008 [CLP] :	Eye Irrit. 2 ; H319

HYDROXYETHYL CELLULOSE, CATIONIC ; REACH registration No. : - ; EC No : Polymer; CAS No. : 68610-92-4

Weight fraction :	< 0,5 %
Classification 67/548/EEC :	N ; R51/53
Classification 1272/2008 [CLP] :	Aquatic Chronic 2 ; H411

FATTY ALCOHOL ALKOXYLATE ; REACH registration No. : - ; CAS No. : 111905-53-4

Weight fraction :	< 0,5 %
Classification 67/548/EEC :	N ; R50 Xi ; R36/38
Classification 1272/2008 [CLP] :	Skin Irrit. 2 ; H315 Eye Irrit. 2 ; H319 Aquatic Acute 1 ; H400

BENZYLSALICYLAT (BENZYL SALICYLATE) ; EC No : 204-262-9; CAS No. : 118-58-1

Weight fraction :	< 0,1 %
Classification 67/548/EEC :	N ; R51/53 R43
Classification 1272/2008 [CLP] :	Skin Sens. 1 ; H317 Aquatic Chronic 2 ; H411

Additional information

Full text of R-, H- and EUH-phrases: see section 16.

4. First aid measures

4.1 Description of first aid measures

General information

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

After 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.

After ingestion

If swallowed, mmediately drink: Water. Do not induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

None

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Carbon dioxide (CO2). Extinguishing powder. Water spray. Water mist.

Unsuitable extinguishing media
High power 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.

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 protective 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 (e.g. 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

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. Open and handle container with care. Keep away from sources of ignition - No smoking. Provide adequate ventilation. Do not breathe aerosol.

Protective measures
Fire prevent measures
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. Keep in a cool, well-ventilated place. Do not store in temperatures below 5 °C.

Hints on storage assembly
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

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^3

DNEL/DMEL and PNEC values

There are no data available on the preparation itself.

DNEL/DMEL

Limit value type :	DNEL/DMEL (Consumer) (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Oral
Exposure frequency :	Long Term (repeated)
Limit value :	87 mg/kg
Safety factor :	24 h
Limit value type :	DNEL/DMEL (Consumer) (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Dermal
Exposure frequency :	Long Term (repeated)
Limit value :	206 mg/kg
Safety factor :	24 h
Limit value type :	DNEL/DMEL (Consumer) (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Inhalation
Exposure frequency :	Short term (acute)
Limit value :	950 mg/m^3
Limit value type :	DNEL/DMEL (Consumer) (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Inhalation
Exposure frequency :	Long Term (repeated)
Limit value :	114 mg/m^3
Limit value type :	DNEL/DMEL (Industrial) (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Dermal
Exposure frequency :	Long Term (repeated)
Limit value :	343 mg/kg
Safety factor :	24 h
Limit value type :	DNEL/DMEL (Industrial) (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Inhalation
Exposure frequency :	Short term (acute)
Limit value :	1900 mg/m^3
Limit value type :	DNEL/DMEL (Industrial) (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Inhalation
Exposure frequency :	Long Term (repeated)
Limit value :	950 mg/m^3

PNEC

Limit value type :	PNEC (Industrial) (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Water (Including sewage plant)
Limit value :	960 µg/l
Limit value type :	PNEC (Industrial) (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Water (Including sewage plant)
Limit value :	790 µg/l
Limit value type :	PNEC (Industrial) (ETHANOL ; CAS No. : 64-17-5)

Exposure route :	Soil
Limit value :	3,6 mg/kg
Limit value type :	PNEC (Industrial) (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Soil
Limit value :	0,63 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye / face protection

Eye glasses with side protection DIN 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 health and safety measures

Keep away from food, drink and animal feeding stuffs. 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.

Occupational exposure controls

Technical measures to prevent exposure

Provide adequate ventilation.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : liquid

Colour : colourless

Odour

mild aromatic Alcohol.

Safety relevant basis data

Melting point / melting range :	(1013 hPa)		no data available		
Boiling temperature/boiling range:	(1013 hPa)	ca.	95	°C	
Flash point :			23	°C	DIN 51755
Ignition temperature :			425	°C	
Lower explosion limit :			3,5	Vol-%	
Upper explosion limit :			15	Vol-%	
Vapour pressure :	(50 °C)	ca.	160	hPa	
Density :	(20 °C)		0,92 - 0,96	g/cm^3	
Solvent separation test :	(20 °C)	<	3	%	
Water solubility :	(20 °C)		100	Wt %	
pH value :			2 - 3		
Flow time :	(20 °C)	<	20	s	DIN-cup 4 mm

9.2 Other information

None

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
Oxidising agent.

10.6 Hazardous decomposition products
None known.

11. Toxicological information

11.1 Information on toxicological effects
There are no data available on the mixture itself.

Acute effects

Acute oral toxicity

Parameter :	LD50 (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Oral
Species :	Rat
Effective dose :	10470 mg/kg
Parameter :	LD50 (CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1)
Exposure route :	Oral
Species :	Mouse
Effective dose :	5400 mg/kg
Parameter :	LD50 (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Oral
Species :	Rabbit
Effective dose :	6300 mg/kg

Practical experience/human evidence

Ethanol: irritating to mucous membranes, narcotic effect.

Acute dermal toxicity

Parameter :	LD50 (CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1)
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	20 g/kg

Acute inhalation toxicity

Parameter :	LC50 (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 51 mg/l
Exposure time :	4 h

Irritant and corrosive effects
There are no data available on the mixture itself.

Sensitisation

No data available.

11.4 Additional information

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

12. Ecological information

12.1 Toxicity

Aquatic toxicity

There are no data available on the preparation itself.

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 (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

Acute (short-term) daphnia toxicity

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

Acute (short-term) algae toxicity

Parameter :	EC50 (CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1)
Species :	Scenedesmus quadricauda
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	425 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

Bacteria toxicity

Parameter :	EC50 (CITRIC ACID MONOHYDRATE ; CAS No. : 5949-29-1)
Species :	Pseudomonas putida
Evaluation parameter :	Bacteria toxicity
Effective dose :	> 10000 mg/l
Exposure time :	16 h

12.2 Persistence and degradability

Abiotic degradation

No data available.

Biodegradation

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

Known or predicted distribution to environmental compartments

There are no data available on the preparation itself.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

No information available.

12.7 Further ecological information

Prevent from flowing into surface water/ground water.

13. Disposal considerations

13.1 Waste treatment methods

Product/Packaging disposal

Waste codes / waste designations according to EWC / AVV

Waste code product

Concentrate/larger quantities: EWC 07 06 04 other organic solvents.

Waste treatment options

Appropriate disposal / Product

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

Appropriate disposal / Package

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

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 l · LQ 7 · E 1
Hazard label(s) : 3

Sea transport (IMDG)
Class(es) : 3
EmS-No : F-E / S-D
Special provisions : LQ 5 l · 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

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
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 substance a chemical safety assessment has not been carried out.

16. Other information

16.1 Indication of changes
None

16.2 Abbreviations and acronyms
None

16.3 Key literature references and sources for data
None

16.4 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Flam. Liq. 3 ; H226 - Flammable liquids : Category 3 ; Flammable liquid and vapour.
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Hazard pictograms

Flame (GHS02)

Signal word

Warning

Hazard Statements

H226	Flammable liquid and vapour.

Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P333/313	If skin irritation or rash occurs: Get medical advice/attention.
P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
10	Flammable.
11	Highly flammable.
36	Irritating to eyes.
36/38	Irritating to eyes and skin.
43	May cause sensitization by skin contact.
50	Very toxic to aquatic organisms.
51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

16.6 Training advice

None

16.7 Additional information

Notice the directions for use on the label.
Dr. Klaus-Michael Wolf Tel. No.: +49 7154 1308-27 · Fax. No.: +49 7154 1308-40 · info@orochemie.de
Dipl. Ing. Elisabeth Gehring Tel. No.: +49 7154 1308-37

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.

Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)

Trade name :	MD 555 cleaner Special detergent for suction systems		
Revision date :	12.11.2012	**Version :**	1.0.0
Date of print :	22.11.2012		

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
MD 555 cleaner Special detergent for suction systems

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses
MD 555 is a non-foaming special cleaner for dental suction systems including drainage lines.

Product categories

PC35 - Washing and cleaning products (including solvent based 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 (manufacturer/importer/only representative/downstream user/distributor)
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 AG, Postfach 1264, D-74302 Bietigheim-Bissingen
Phone No.: +49 7142 705-0, Telefax No.: +49 7142 61365, info@duerr.de
in Great Britain:
DÜRR DENTAL [Products] UK Ltd., 14 Linnell Way - Telford Way Industrial Estate, GB-Kettering Northants NN16 8PS
Phone No.: +44 1536 526740, Telefax No.: +44 1536 526749, info@duerruk.com

1.4 Emergency Telephone Number
INT: +49 6132 84463 (24 h/7 d)

2. Hazards identification

2.1 Classification of the substance or mixture
Classification according to Directive 67/548/EEC or 1999/45/EC
Irritating to eyes.

Xi ; R 36

2.2 Label elements
Labelling (67/548/EEC or 1999/45/EC)
Hazard symbols and hazard statements of dangerous substances and preparations


Xi ; Irritant

R-phrases

36	Irritating to eyes.

S-phrases

37	Wear suitable gloves.
26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice .

2.3 Other hazards
None

3. Composition/information on ingredients

3.2 Mixtures

Description

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

Hazardous ingredients

CITRIC ACID ; EC No : 201-069-1; CAS No. : 77-92-9

Weight fraction :	40 - 50 %
Classification 67/548/EEC :	Xi ; R36
Classification 1272/2008 [CLP] :	Eye Irrit. 2 ; H319

Additional information

Full text of R-, H- and EUH-phrases: see section 16.

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).

After 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.

After ingestion

If swallowed, mmediately drink: Water. Do not induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

None

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2). Extinguishing powder. Water spray. Water mist. The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power 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.

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 protective 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 (e.g. 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

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. Open and handle container with care. Provide adequate ventilation. Do not breathe aerosol.

Protective measures

Fire prevent measures

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. Keep in a cool, well-ventilated place. Do not store in temperatures below 5 °C.

Hints on storage assembly

Store the foodstuffs separately.

7.3 Specific end use(s)

None

8. Exposure controls/personal protection

8.1 Control parameters

DNEL/DMEL and PNEC values

There are no data available on the preparation itself.

8.2 Exposure controls

Personal protective equipment

Eye / face protection

Eye glasses with side protection DIN 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 health and safety measures

Keep away from food, drink and animal feeding stuffs. 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.

Occupational exposure controls

Technical measures to prevent exposure

Provide adequate ventilation.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : liquid

Colour : clear light red

Odour

odourless

Safety relevant basis data

Melting point / melting range :	(1013 hPa)		no data available		
Boiling temperature/boiling range:	(1013 hPa)	ca.	100	°C	
Flash point :			not applicable		DIN 51755
Ignition temperature :			not applicable		
Lower explosion limit :			not applicable		
Upper explosion limit :			not applicable		
Density :	(20 °C)		1,2 - 1,24	g/cm^3	
Water solubility :	(20 °C)		100	Wt %	
pH value :	(20 °C / 100 g/l)		1,5 - 2,5		

9.2 Other information

None

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). Exothermal reaction with alkalis.

10.3 Possibility of hazardous reactions

Exothermal reaction with alkalis.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

None known.

11. Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself.

Acute effects

Acute oral toxicity

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.

Irritant and corrosive effects

Causes serious eye irritation.

Sensitisation

None known.

11.4 Additional information

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

12. Ecological information

12.1 Toxicity

Aquatic toxicity

There are no data available on the preparation itself.

12.2 Persistence and degradability

Abiotic degradation

No data available.

Biodegradation

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

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

There are no data available on the preparation itself.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

No information available.

12.7 Further ecological information

Prevent from flowing into surface water/ground water.

13. Disposal considerations

13.1 Waste treatment methods

Product/Packaging disposal

Waste codes / waste designations according to EWC / AVV

Waste code product

Concentrate/larger quantities: EWC 20 01 14 acids.

Waste treatment options

Appropriate disposal / Product

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

Appropriate disposal / Package

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

14. Transport information

14.1 UN number

No dangerous good in sense of this transport regulation.

14.2 UN proper shipping name

No dangerous good in sense of this transport regulation.

14.3 Transport hazard class(es)

No dangerous good in sense of this transport regulation.

14.4 Packing group

No dangerous good in sense of this transport regulation.

14.5 Environmental hazards

No dangerous good in sense of this transport regulation.

14.6 Special precautions for user

None

15. Regulatory information

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

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 substance a chemical safety assessment has not been carried out.

16. Other information

16.1 Indication of changes

None

16.2 Abbreviations and acronyms

None

16.3 Key literature references and sources for data

None

16.4 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]

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

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

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

Hazard pictograms

Exclamation mark (GHS07)

Signal word

Warning

Hazard Statements

H319	Causes serious eye irritation.

Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P333/313	If skin irritation or rash occurs: Get medical advice/attention.
P305/351/338	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/shower.
P403/233	Store in a well-ventilated place. Keep container tightly closed.

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

H319	Causes serious eye irritation.
36	Irritating to eyes.

16.6 Training advice

None

16.7 Additional information

Notice the directions for use on the label.
Dr. Klaus-Michael Wolf Tel. No.: +49 7154 1308-27 · Fax. No.: +49 7154 1308-40 · info@orochemie.de
Dipl. Ing. Elisabeth Gehring Tel. No.: +49 7154 1308-37

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.