Safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH)
Date of issue: 26.08.2015 Supersedes edition of: ---

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

1.1 Product identifier

Product name: Lorito DR 3301 Küchendesinfektionsreiniger

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

Disinfectant cleaner

1.3 Details of the supplier of the safety data sheet

Company: Otto Oehme GmbH
Industriestraße 20
D-90584 Allersberg Deutschland
Tel. +49 9176 98050
info@oehme-lorito.de

1.4 Emergency telephone number

GIZ Nord Poisons Center, Göttingen Tel. +49 (0) 551 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)
Skin Corr. 1B, H314
Aquatic acute 1, H400
Aquatic Chronic 2, H411

Full text of hazard statements: See under section 16.

Classification (67/548/EEC or 1999/45/EC)
C, N Corrosive, Dangerous for the environment R 34-50

Full text of R-Phrases: See under section 16.

2.2 Label elements

Labelling (Regulation (EC) No. 1272/2008)
Hazard pictograms:

Signal word:
Danger

Hazard statements:
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:
P260 Do not breathe vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water (or shower).
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

Contains: Ethanolamine, Didecyldimethylammonium chloride.

Labelling (67/548/EEC or 1999/45/EC)
Symbol: C, N Corrosive, Dangerous for the environment.

R-phrases: 34-50
Causes burns. Very toxic to aquatic organisms.

S-phrases: 26-28-36/37/39-45-60-61
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the lable where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

Contains: Ethanolamine, Didecyldimethylammonium chloride.

2.3 Other hazards

Nor known.

SECTION 3: Composition / information on ingredients

Solution in water.

Hazardous components (Regulation (EC) No. 1272/2008)

Chemical name / *CAS-No.*	*EC-No.*	*EC-Index-No.*	*Labelling according to EC-Regulation*	Content
Ethanolamine				<10 %
141-43-5	205-483-3	603-030-00-8	Acute Tox. 4, H302 Acute Tox. 4, H332 Acute Tox. 4, H312 Skin Corr. 1B, H314	
REACH Registration Number: 01-2119486455-28				
Didecyldimethylammonium chloride (*)				<10 %
7173-51-5	230-525-2	612-131-00-6	Acute Tox. 3, H301 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	
Potassium carbonate				<20 %
584-08-7	209-529-3		Skin Irrit. 2, H315	

			Eye Irrit. 2, H319 STOT SE 3, H335	
REACH Registration Number: 01-2119532646-36				
2-Propanol				<20 %
67-63-0	200-661-7	603-117-00-0	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	
REACH Registration Number: 01-2119457558-25				

Full text of hazard statements: See under section 16.

Hazardous components (1999/45/EC)

Chemical name *CAS-No.*	*EC-No.*	*EC-Index-No.*	*Labelling according to EC-Directives*	Content
Ethanolamine				
141-43-5	205-483-3	603-030-00-8	Xn, C R 20/21/22-34	<10 %
REACH Registration Number: 01-2119486455-28				
Didecyldimethylammonium chloride (*)				
7173-51-5	230-525-2	612-131-00-6	C, N R 22-34-50	<10 %
Potassium carbonate				
584-08-7	209-529-3		Xi R 36/37/38	<20 %
REACH Registration Number: 01-2119532646-36				
2-Propanol				
67-63-0	200-661-7	603-117-00-0	F, Xi R 11-36-67	<20 %
REACH Registration Number: 01-2119457558-25				

Full text of R-Phrases: See under section 16.

(*) A registration number is not aviable for this substance as the substance or its use is exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation: Fresh air. Call in physician if feeling unwell.
After skin contact: Wash off with plenty of water. Swap with polyethylene glycol 400. Immediately remove contaminated clothing. Call a physician immediately.
After eye contact: Rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist immediately.
After swallowing: Make victim drink plenty of water (two glasses at most), avoid vomiting (risk of perforation). Immediately call in physician. Do not attempt to neutralise.
Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects, bronchitis, Cough, Shortness of breath, respiratory paralysis, drowsiness, dizziness, unconsciousness, narcosis, inebriation, headache, coma.
Drying-out effect resulting in rough and chapped skin.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Carbon dioxide, foam, dry powder.

Unsuitable extinguishing media
For this substance / mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Contains combustible material. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air at ambient temperatures. Pay attention to flashback. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters
Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Further information
Prevent fire-fighting water from entering surface water or groundwater.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Caution: Risk of slipping.
Do not inhale vapours/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

6.2 Environmental precautions

Do not allow to enter sewerage system.

6.3 Methods and material for containment and cleaning up

Take up with incombustible liquid-absorbent material. Forward for disposal. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Notes for safe handling
Ensure adequate ventilation. Avoid contact with skin and eyes. Do not inhale vapours/aerosols. Avoid generation of vapours/aerosols. See section 8.

Notes for prevention of fire and explosion
Not required.

7.2 Conditions for safe storage, including any incompatibilities

Store cool above 5 °C. Keep away from sun and heat.
Tightly closed in a well-ventilated place.

7.3 Specific end use(s)

Apart fron the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

2-Propanol
EH40 WEL

Name	2-Propanol
Short term exposure limit (STEL)	500 ppm 1250 mg/m^3
Time weighted average (TWA)	400 ppm 999 mg/m^3

Ethanolamine
EH40 WEL

Name	Ethanolamin
Short term exposure limit (STEL)	3 ppm 7.6 mg/m^3
Time weighted average (TWA)	1 ppm 2.5 mg/m^3

8.2 Exposure controls

Individual protection measures
Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye / face protection:
Tightly fitting safety goggles (EN 166).

Hand protection:
Glove material: Nitrile rubber.
Details on the penetration time have to be asked by the manufacturer.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN 374.

Respiratory protection:
Required when vapours/aerosols are generated. Filter A (EN 14387).

Hygiene measures
Change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form:		liquid
Colour:		colourless
Odour:		characteristic
pH value		~ 12
Melting point		not specified
Boiling point		not specified
Ignition temperature		not applicable
Flash point		not applicable
Explosion limits	lower	3.4 % (Ethanolamine)
	upper	27 % (Ethanolamine)
Explosion limits	lower	2 % (2-Propanol)
	upper	13.4 % (2-Propanol)
Density (23 °C)		~ 1.1 g/cm^3
Viscosity, dynamic		not specified
Solubility in water		soluble

9.2 Other information

None.

SECTION 10: Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Acrolein, nitriles, chlorosulfonic acid, hydrogen chloride gas, acetic acid, Acetic anhydride, fuming sulfuric acid, nitric acid, sulphuric acid, mineral acids, vinyl acetate, oxidizing agents.

Risk of ignition or formation of inflammable gases or vapours with:
Sulfur, iron(III) compounds, alkali metals, alkaline earth metals, aluminium.
Exothermic reaction with: Oxidants, nitrous acid, iron.
Risk of explosion with: Chlorates, organic nitro compounds, hydrogen peroxide.
Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitosamines!

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Rubber, various plastics, oils, copper, copper alloys.

10.6 Hazardous decomposition products

See section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity
LD_{50} rat: 238 mg/kg (OECD 401; Didecyldimethylammonium chloride)
LDLo human: 3570 mg/kg (RTECS; 2-Propanol)
LD_{50} rat: 5045 mg/kg (RTECS; 2-Propanol)
Symptoms: Risk of aspiration upon vomiting, aspiration may cause pulmonary oedema and pneumonitis.
LD_{50} rat: 1515 mg/kg (external MSDS; Ethanolamine)
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
LD_{50} rat: >2000 mg/kg (IUCLID; Potassium carbonate)
Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute dermal toxicity
LD_{50} rabbit: 3342 mg/kg (external MSDS; Didecyldimethylammonium chloride)
LD_{50} rabbit: 12800 mg/kg (RTECS; 2-Propanol)
LD_{50} rabbit: 1025 mg/kg (IUCLID; Ethanolamine)

Acute inhalation toxicity
ATE: 11.1 mg/l /4 h (external MSDS; Ethanolamine)
Symptoms: mucosal irritations, Shortness of breath, Cough, Possible damages:, bronchitis, damage of respiratory tract. Absorption.
LC_{50} rat: 46.5 mg/l /4 h (external MSDS; 2-Propanol)
Symptoms: Drowsiness, dizziness, irritation symptoms in the respiratory tract.
Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Skin irritation
Rabbit: Causes burns (OECD 404; Didecyldimethylammonium chloride).
Rabbit: Causes burns (IUCLID; Ethanolamine).
Rabbit: Irritations (IUCLID; Potassium carbonate).
Causes skin irritation.

Eye irritation
Rabbit: Causes burns (external MSDS; Didecyldimethylammonium chloride)
Rabbit: Eye irritation (RTECS, 2-Propanol).
Causes serious eye irritation.
Rabbit: Causes burns (IUCLID; Ethanolamine)
Causes serious eye damage. Risk of blindness!
Rabbit: Eye irritation (IUCLID; Potassium carbonate)
Causes serious eye irritation.

Sensitisation
Guinea pig: Negative (Buehler Test; Didecyldimethylammonium chloride).
Guinea pig: Negative (IUCLID; 2-Propanol).

Genotoxicity in vivo
Mutagenicity (mammal cell test): Micronucleus: Negative (OECD 474; Ethanolamine).
Chromosome Aberration Test, oral, rat: Negative (OECD 475; Didecyldimethylammonium chloride).

Genotoxicity in vitro
Ames test: Salmonella typhimurium: Negative (OECD 471;
Didecyldimethylammonium chloride).
Chromosome Aberration Test, CHO-cells: Negative (external MSDS; Didecyldimethylammonium chloride).
Gene mutation, CHO-cells: Negative (external MSDS; Didecyldimethylammonium chloride).
Ames Test: Negative (IUCLID; 2-Propanol).
Mutagenicity (mammal cell test): Micronucleus: Negative (external MSDS; 2-Propanol).
Ames Test: Negative (IUCLID; Ethanolamin)
Ames Test: Negative (IUCLID; Potassium carbonate)

Carcinogenicity
Did not show carcinogenic effects in animal experiments (IUCLID; 2-Propanol).

Reproductive toxicity
No impairment of reproductive performance in animal experiments (IUCLID; 2-Propanol).

Teratogenicity
Did not show teratogenic effects in animal experiments (IUCLID; 2-Propanol).

Specific target organ toxicity – single exposure
May cause drowsiness or dizziness.

Specific target organ toxicity – repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
No aspiration toxicity classification.

11.2 Further information

Systemic effects: After absorption: Headache, dizziness, inebriation, unconsciousness, narcosis,

nausea, drowsiness. Damage to: Kidney, Liver.
After absorption of large quantities: Respiratory paralysis, coma.

Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish
Pimephales promelas LC_{50}: 0.19 mg/l /96 h (US-EPA; Didecyldimethylammonium chloride).
Danio rerio NOECD: 0.032 mg/l /34 d (OECD 210; Didecyldimethylammonium chloride).
Lepomis macrochirus LC_{50}: 1400 mg/l /96 h (ECOTOX Database; 2-Propanol)
Oncorhynchus mykiss LC_{50}: 150 mg/l /96 h (IUCLID; Ethanolamine)

Toxicity to daphnia an other aquatic invertebrates
Daphnia magna: EC_{50}: 0.062 mg/l /48 h (EPA-FIFRA; Didecyldimethylammonium chloride).
Daphnia magna: NOEC: 0.010 mg/l /21 d (OECD 211; Didecyldimethylammonium chloride).
Daphnia magna: EC_{50}: 13299 mg/l /48 h (IUCLID; 2-Propanol)
Entosiphon sulcatum: EC_5: 4930 mg/l /72 h (maximum permissible toxic concentration; external MSDS; 2-Propanol)
Entosiphon sulcatum: EC_5: 45 mg/l /72 h (IUCLID; Ethanolamine)
Daphnia magna: EC_{50}: 65 mg/l /48 h (IUCLID; Ethanolamine)

Toxicity to algea
EC_{50}: 0.026 mg/l /96 h (OECD 201; Didecyldimethylammonium chloride)
Desmodesmus subspicatus IC_{50}: > 1000 mg/l / 72 h (IUCLID; 2-Propanol)
Desmodesmus subspicatus IC_{50}: 22 mg/l / 72 h (IUCLID; Ethanolamine)
Scenedesmus quadricauda IC_5: 0.75 mg/l / 8 d (IUCLID; Ethanolamine)

Toxicity to bacteria
Activated sludge EC_{50}: 11 mg/l /3 h (OECD 209; Didecyldimethylammonium chloride).
Pseudomonas putida EC_5: 1050 mg/l /16 h (external MSDS; 2-Propanol)
Activated sludge EC_{50}: >1000 mg/l /3 h (OECD 209; Ethanolamine)

12.2 Persistence and degradability

Biodegradability
The surfactants contained in this preparation complies with the Biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.
Data to support this assertion are held at the disposal of the competent authorities of the member states and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Biodegradation: 72 % / 28 d (OECD 301B; Didecyldimethylammonium chloride).
Readily biodegradable (Didecyldimethylammonium chloride).
Biodegradation: 95 % / 21 d (OECD 301E; 2-Propanol)
Readily biodegradable (2-Propanol)
Biodegradation: 90-100 % / 28 d (OECD 301F; Ethanolamine)
Readily biodegradable (Ethanolamine)

Biochemical Oxygen Demand (BOD)
800 mg/g (5 d) (IUCLID; Ethanolamine)

Theoretical oxigen demand (ThOD)
2400 mg/g (external MSDS, 2-Propanol)
1310 mg/g (IUCLID; Ethanolamine)

Ratio BOD / ThBOD
BOD_5: 49 % (IUCLID; 2-Propanol)

Ratio COD / ThBOD
96 % (external MSDS, 2-Propanol)

12.3 Bioaccumulative potential

Partition coefficient n-octanol / water: log P_{OW}: 0,05 (OECD 107; 2-Propanol).
No bioaccumulation is to be expected (2-Propanol).
Partition coefficient n-octanol / water: log P_{OW}: -1.91 (OECD 107; Ethanolamine)
No bioaccumulation is to be expected (Ethanolamine)

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT / vPvB assessment not available as chemical safety assessment not required / not conducted.

12.6 Other adverse effects

Additional ecological information:
Biological effects: Harmful effect due to pH shift.
Do not allow to enter waters, waste water, or soil!

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product:
Chemicals must be disposed of in compliance with the respective national regulations.

Code of the waste	Name according to directive 2000/532/EC:
200129*	detergents containing dangerous substances.
070601*	aqueous washing liquids and mother liquors.

Packaging:
Product packaging must be disposed of in compliance with the country-specific regulations or must be to a packaging return system.

Code of the waste	Name according to directive 2000/532/EC:
200139	plastics.

SECTION 14: Transport information

Road and rail, ADR/RID
UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Didecyldimethylammonium chloride, ethanolamine), 8, II, (E)
Environmentally hazardous: Yes.

Inland waterway, ADN
Not tested.

Sea, IMDG-Code
UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Didecyldimethylammonium chloride, ethanolamine), 8, II
EmS: F-A, S-B
Marine pollutant: Yes.

Air, IATA-DGR
UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Didecyldimethylammonium chloride, ethanolamine), 8, II
Environmentally hazardous: Yes.

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.

SECTION 15: Regulatory information

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

EU regulations
Ingredients according to Regulation (EC) on detergents No. 648/2004:
Non-ionic surfactants: Less than 5 %
Disinfectants: Didecyldimethylammoniumchlorid.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Full text of hazard statements referred to under sections 2 and 3:
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
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.

Full text of R phrases referred to under sections 2 and 3:

11	Highly flammable.
20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
34	Causes burns.
36	Irritating to eyes.
36/37/38	Irritating to eyes, respiratory system and skin.

67 Vapours may cause drowsiness and dizziness.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.