Material Safety Data Sheet

01. Identification of the substance/preparation and of the company/undertaking

Product name: Orotol® Plus Disinfection of suction systems

Use of the substance / preparation: 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.

Manufacturer/Supplier: orochemie GmbH + Co. KG
Street/P.O.Box: Max-Planck-Straße 27
Country code/Postal code/Town/City: 70806 Kornwestheim
Telephone: +49 7154 1308-0
Telefax: +49 7154 1308-40

Distributor: DÜRR DENTAL AG, Postfach 1264, D-74302 Bietigheim-Bissingen
Phone No.: +49 7142 705-0, Telefax No.: +49 7142 61365
in Canada: SciCan / Division of Lux & Zwingenberger Ltd., 1440 Don Mills Road, Toronto, Ontario, Canada M3B 3P9
Phone No.: 416 446-2705
Emergency information: (416) 445-1600

02. Hazards identification

Hazard designation
Risk of serious damage to eyes. · Irritating to skin.
Classification: Xi ; R 41 · Xi ; R 38

03. Composition/information on ingredients

Chemical characterization
Orotol® Plus contains quaternary ammonium compounds, alkaline cleaning agents, complexing agents, special antifoaming agents and auxiliary agents in aqueous solution.

Hazardous components
DIOCTYL-DIMETHYL AMMONIUM CHLORIDE ; CAS-No.: 68424-95-3
Percentage : 1 - 5 %
Classification : R 10 N ; R 50 C ; R 34 Xn ; R 22
SODIUM ETHYLENEDIAMINETETRAACETATE ; EC-No.: 200-573-9; CAS-No.: 64-02-8
Percentage : 1 - 5 %
Classification : Xi ; R 41 Xn ; R 22
DODECYLDIMETHYLBENZYLAMONIUM CHLORIDE ; EC-No.: 287-089-1; CAS-No.: 85409-22-9
Percentage : 0,5 - 1 %
Classification : N ; R 50 C ; R 34 Xn ; R 22
POTASSIUM HYDROXIDE ; EC-No.: 215-181-3; CAS-No.: 1310-58-3
Percentage : 0,5 - 2 %
Classification : C ; R 35 Xn ; R 22

For the wording of the listed risk phrases refer to section 16.

04. First-aid measures

General
Immediately remove all contaminated clothing.

After inhalation
Let in fresh air. Call a doctor, should the air passages be affected.

After skin contact
Flush with plenty of water.

After eye contact
Flush with plenty of water (10 - 15 min.). Contact a doctor immediately.

After ingestion
Drink plenty of water. Do not induce vomiting. Contact a doctor immediately.

05. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing media
Waterjet.

Special risk posed by the substance or by the actual preparation, its combustion products or gases discharged
None known.

Special protective equipment
Adapt protective equipment to surrounding fire.

06. Accidental release measures

Personal precautions
Wear suitable protective clothing, gloves and eye/face protection.

Environmental precautions
Prevent from flowing into surface water/ground water.

Methods for cleaning up/collection
Take up with a liquid absorbing material and proceed according to the waste disposal regulations.

Additional information
Remove according to regulations.

07. Handling and storage

Information for safe handling
Containers to be opened and handled with care.

Information about protection against explosions and fires
No anti-explosion measures necessary.

Requirements to be met by storerooms and containers
Keep only in the original container. Keep in a cool place. Do not store in temperatures below 5 °C.

Information about separation of incompatible products
Store the foodstuffs separately.

08. Exposure controls/personal protection

Additional information about engineering measures
No particular measures required.

Personal protective equipment
Do not eat or drink during work - no smoking. Keep away from food, drink and animal feeding stuff. Avoid contact with skin and eyes.

Respiratory protection
No particular measures required.

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.

Eye protection
Use tightly fitting safety glasses.

Body protection
No particular measures required.

09. Physical and chemical properties
Material Safety Data Sheet

Product name : Orotol® Plus Disinfection of suction systems
Revision : 15.10.2012 Version : 5.0.0
Print date : 15.10.2012

Image
Form : Liquid.
Colour : Clear, Yellow.
Odour : Mild aromatic, Fresh.

Relevant safety data
Melting point / range : (1013 hPa) no data available
Boiling point / range : (1013 hPa) ca. 100 °C
Flash point : not applicable
Ignition temperature : not applicable
Lower explosion limit : not applicable
Upper explosion limit : not applicable
Density : (20 °C) 1,07 - 1,11 g/cm³
Solubility in water : (20 °C) 100 % b.w.
pH value : (20 °C / 20 g/l) 10 - 11

10. Stability and reactivity
Conditions to avoid
None, if handled according to order.

Materials to avoid
None known.

Hazardous decomposition products
None known.

11. Toxicological information
Toxicological tests
LD50/LC50 values that are relevant for classification
Specification : LD-50
Routes of entry : oral
Test species : Rat
Value / dosage : > 2000 mg/kg
Speciﬁcation : LD-50
Routes of entry : skin
Test species : Rat
Value / dosage : > 2000 mg/kg
Primary irritant effect
Sensitization

Experience on practice
The product has an irritating effect on eyes and skin.

Additional toxicological 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
Details on elimination (persistence / degradability)
Abiotical elimination
No data available.
Biological degradation / elimination
The product is easily biodegradable according to OECD criteria.

Fate in environmental compartments
There are no data available on the preparation itself.

Ecotoxic effects
Performance in sewage-treatment plants
In case of appropriate conduction into adapted biological purification plants no disturbances have to be expected.

13. **Disposal considerations**

**Product**
Concentrate/larger quantities: EWC 18 01 06 (disinfectant). Disposal in conformity with authority regulations.

**Contaminated packaging**
Contaminated packaging must be emptied of all residues and, following appropriate cleaning, may be sent to a recycling plant. Uncleaned packaging must be disposed of in the same manner as the medium.

14. **Transport information**

**Land transport ADR/RID**

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**Proper shipping name**
CAUSTIC ALKALI LIQUID, N.O.S.

**Hazardous components**
DIOCTYL-DIMETHYL AMMONIUM CHLORIDE · POTASSIUM HYDROXIDE

**Packaging**
Packaging group : III
Label : 8

**Maritime transport IMDG/GGVSea**

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CAUSTIC ALKALI LIQUID, N.O.S.

**Hazardous components**
DIOCTYL-DIMETHYL AMMONIUM CHLORIDE · POTASSIUM HYDROXIDE

**Packaging**
Packaging group : III
Label : 8

**Air transport ICAO-TI and IATA-DGR**

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**Proper shipping name**
CAUSTIC ALKALI LIQUID, N.O.S.

**Hazardous components**
DIOCTYL-DIMETHYL AMMONIUM CHLORIDE · POTASSIUM HYDROXIDE

**Packaging**
Packaging group : III
Label : 8

15. **Regulatory information**

**Classification**

**Danger symbol and danger designation**

![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.

16. Other information
Processing instructions / technical data sheets
Please observe the label/directions for use!

Further information
Relevant changes
- R-phrases of components
  10 Flammable.
  22 Harmful if swallowed.
  34 Causes burns.
  35 Causes severe burns.
  41 Risk of serious damage to eyes.
  50 Very toxic to aquatic organisms.

Contact
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Dipl. Ing. Elisabeth Gehring Tel. No.: +49 7154 1308-37

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.