

Material Safety Data Sheet
According to 91/155 EC

Printing date 20.11.2002

Reviewed on 20.11.2002

1 Identification of substance

- Product details:
- Trade name: ALTO DES 4000
- Application the preparation: Sour disinfectant liquid
- Manufacturer/Supplier:
ALTO Deutschland GmbH
Guido-Oberdorfer-Straße 2-8 Telefon: +49 7306/72-0
D - 89287 Bellenberg Telefax: +49 7306/72-316
- Informing department: Department cleaning and care agents
- Emergency information:
National Poisons
Information Service (L)
Medical Toxicology Unit
Avonley Road
Tel:0171/635 91 91
Fax:0171/771 53 09

2 Composition/Data on components

- Chemical characterization
- Description:
Mixture of the substances listed below with harmless additions.
- Dangerous components:

107-22-2 Glyoxal 40%	15-30 %
Xi; R 36/38-43	
50-00-0 formaldehyde	5-15 %
T; R 23/24/25-34-40-43 EINECS: 200-001-8	
7173-51-5 didecyldimethylammonium chloride	5-15 %
C; R 22-34 EINECS: 230-525-2	
127036-24-2 Fettalkoholpolyglycoether 6-15 EO	1-5 %
Xn; R 22-36/38	
67-63-0 propan-2-ol	1-5 %
Xi; R 36-67 EINECS: 200-661-7	
111-30-8 glutaral	1-5 %
T, N; R 23/25-34-42/43-50 EINECS: 203-856-5	

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

3 Hazards identification

- Hazard designation: C Corrosive
- Information pertaining to particular dangers for man and environment
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- R 34 Causes burns.
- R 40 Limited evidence of a carcinogenic effect.

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R 42/43 May cause sensitisation by inhalation and skin contact.

- Classification system

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

4 First aid measures

- General information

Instantly remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation

Supply fresh air and call for doctor for safety reasons.

In case of unconsciousness bring patient into stable side position for transport.

- After skin contact

Instantly wash with water and soap and rinse thoroughly.

Instantly rinse with water.

- After eye contact

Rinse opened eye for several minutes under running water. Then consult doctor.

- After swallowing

Instantly call for doctor.

Drink copious amounts of water and provide fresh air. Instantly call for doctor.

5 Fire fighting measures- Suitable extinguishing agents CO₂, sand, extinguishing powder, water.- Protective equipment: Put on breathing apparatus.

6 Accidental release measures

- Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

- Measures for environmental protection: No special measures required.

- Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage

- Handling

- Information for safe handling:

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

- Information about protection against explosions and fires:

No special measures required.

- Storage

- Requirements to be met by storerooms and containers:

No special requirements.

- Information about storage in one common storage facility: Not required.

- Further information about storage conditions:

Keep container tightly sealed.

- Storage class

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- Class according to regulation on inflammable liquids: A III

8 Exposure controls and personal protection

Components with limit values that require monitoring at the workplace:

50-00-0 formaldehyde (5-15%)

MEL: Short-term value: 2.5 mg/m³, 2 ppmLong-term value: 2.5 mg/m³, 2 ppm

67-63-0 propan-2-ol (1-5%)

OES: Short-term value: 1250 mg/m³, 500 ppmLong-term value: 999 mg/m³, 400 ppm

111-30-8 glutaral (1-5%)

MEL: Short-term value: 0.2 mg/m³, 0.05 ppmLong-term value: 0.2 mg/m³, 0.05 ppm

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OES: Short-term value: 0.7 mg/m³, 0.2 ppm

- Personal protective equipment
- General protective and hygienic measures
Keep away from foodstuffs, beverages and food.
Take off immediately all contaminated clothing
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
- Breathing equipment:
Not necessary with good ventilation or in fresh air
Do not breathe spray.
- Protection of hands:
Protective gloves.
The glove material has to be impermeable and resistant to the product/
the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be
given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration
times, rates of diffusion and the degradation
- Material of gloves
The selection of the suitable gloves does not only depend on the
material, but also on further marks of quality and varies from
manufacturer to manufacturer. As the product is a preparation of
several substances, the resistance of the glove material can not be
calculated in advance and has therefore to be checked prior to the
application.
- Penetration time of glove material
The exact break through time has to be found out by the manufacturer of
the protective gloves and has to be observed.
- Eye protection:
Safety glasses

9 Physical and chemical properties:

- General Information

- Form: Fluid

- Colour: yellowish

- Odour: Characteristic

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Value/Range Unit Method

- Change in condition

- Melting point/Melting range: Not determined

- Boiling point/Boiling range: -21 ° C

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- Flash point: > 55 ° C
- Ignition temperature: 285.0 ° C
- Self-inflammability: Product is not selfigniting.
- Danger of explosion: Product is not explosive.
- Critical values for explosion:
 - Lower: 7.0 Vol %
 - Upper: 73.0 Vol %
- Vapour pressure: at 20 ° C 24.0 hPa
- Density at 20 ° C 1.050 g/cm³
- Solubility in / Miscibility with Water: Fully miscible
- pH-value: (10 g/l) at 20 ° C 4.8
- Viscosity:
 - dynamic: at 20 ° C 20 mPas

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- Dangerous reactions No dangerous reactions known
- Dangerous products of decomposition:
No hazardous decomposition products known

11 Toxicological information

- Acute toxicity:
LD/LC50 values that are relevant for classification:
50-00-0 formaldehyde
Oral: LD50: >200 mg/kg (rat)
- Primary irritant effect:
 - on the skin:
Strong caustic effect on skin and mucous membranes.
cause irritation, burns possible with prolonged contact
 - on the eye: No irritant effect.
- Sensitisation:
Sensitisation possible by inhalation.
Sensitisation possible by skin contact.
- Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and

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to the danger of perforation of esophagus and stomach.

12 Ecological information

- General notes:
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
Do not pour into groundwater or other bodies of water.
Must not reach sewage water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into soil.
Do not allow undiluted produkt or large quantities of it ground water and water bodies.
Diluted solutions may be disposed of in sewage plants.

13 Disposal considerations

- Product:
- Recommendation
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
- Recommendation:
Disposal must be made according to official regulations.

14 Transport information

- Land transport ADR/RID (cross-border)
 - ADR/RID Class: 3 (FC) Flammable liquids.
 - Kemler Number: 38
 - UN-Number: 2924
 - Packaging group: III
 - Label 3+8
 - Designation of goods: 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(didecyldimethylammonium chloride)
- Maritime transport IMDG:
 - IMDG Class: 3
 - UN Number: 2924
 - Label 3+8
 - Packaging group: III
 - EMS Number: 3-02
 - Marine pollutant: No
 - Correct technical name: FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(didecyldimethylammonium chloride)
- Air transport ICAO-TI and IATA-DGR:
 - ICAO/IATA Class: 3
 - UN/ID Number: 2924
 - Label 3+8
 - Packaging group: III
 - Correct technical name: FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(didecyldimethylammonium chloride)

15 Regulatory information

- Designation according to EC guidelines:
The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

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- Code letter and hazard designation of product: C Corrosive
- Hazard-determining components of labelling:
formaldehyde
Glyoxal 40%
glutaral
didecyldimethylammonium chloride
- Risk phrases:
20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
34 Causes burns.
40 Limited evidence of a carcinogenic effect.
42/43 May cause sensitisation by inhalation and skin contact.
- Safety phrases:
3 Keep in a cool place.
9 Keep container in a well-ventilated place.
20 When using do not eat or drink.
23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28 After contact with skin, wash immediately with plenty of water.
- National regulations
- Classification according to VbF: A III
- Technical instructions (air):
Class Share in %
I 5-15
III 1-5
- Water hazard class:
Water hazard class 2 (Self-assessment): hazardous for water.

16 Other information

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.

- Relevant R-phrases
22 Harmful if swallowed.
23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
23/25 Toxic by inhalation and if swallowed.
34 Causes burns.
36 Irritating to eyes.
36/38 Irritating to eyes and skin.
40 Limited evidence of a carcinogenic effect.
42/43 May cause sensitisation by inhalation and skin contact.
43 May cause sensitisation by skin contact.
50 Very toxic to aquatic organisms.
67 Vapours may cause drowsiness and dizziness.
- Department issuing data specification sheet:
Department cleaning and care agents