

Material Safety Data Sheet
According to 91/155 EC

Printing date 22.11.2002

Reviewed on 22.11.2002

Trade name: ALTO Stone-Ex

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- After eye contact
Rinse opened eye for several minutes under running water. Then consult doctor.
- After swallowing
Drink copious amounts of water and provide fresh air. Instantly call for doctor.

5 Fire fighting measures

- Suitable extinguishing agents
CO₂, extinguishing powder or water spray jet with softener additives or with alcohol-resistant foam.
- Protective equipment: No special measures required.

6 Accidental release measures

- Person-related safety precautions: see point 8
Wear protective equipment. Keep unprotected persons away.
- Measures for environmental protection: Dilute with much water.
- 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. Ensure good ventilation.
- Storage class
- Class according to regulation on inflammable liquids: Void

8 Exposure controls and personal protection

Components with limit values that require monitoring at the workplace:

64-18-6 formic acid (>30%)

OES: Long-term value: 9.6 mg/m³, 5 ppm
ILV

Phosphorsäure (5-15%)

OES: Short-term value: 2 mg/m³
Long-term value: 1 mg/m³
IOELV, Sk

- Personal protective equipment

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- 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
- 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 trough time has to be found out by the manufacturer of
the protective gloves and has to be observed.
- Eye protection: Tightly sealed safety glasses.

9 Physical and chemical properties:

- General Information
- Form: Fluid
- Colour: Red
- Odour: Pungent
-
-
- Change in condition
- Melting point/Melting range: Not determined
- Boiling point/Boiling range: 100 ° C
- Flash point: Not applicable
- Ignition temperature: 520.0 ° C
- Self-inflammability: Product is not selfigniting.
- Danger of explosion: Product is not explosive.
- Vapour pressure: at 20 ° C 43.0 hPa
- Density at 20 ° C 1.105 g/cm³
- Solubility in / Miscibility with
- Water: Fully miscible
- pH-value: (10 g/l) at 20 ° C 2

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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 dangerous decomposition products known

11 Toxicological information

- Acute toxicity:
LD/LC50 values that are relevant for classification:
64-18-6 formic acid
Oral: LD50: 1100 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.
- Sensitization: No sensitizing effect known.
- 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:
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information:

- General notes:
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralized.
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.
- Recommended cleaning agent: Water, if necessary with cleaning agent.

14 Transport information

- Land transport ADR/RID (cross-border)
- ADR/RID Class: 8 (C9) Corrosive substances.
- Kemler Number: 80
- UN-Number: 1760

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- Packaging group: II
- Label: 8
- Designation of goods: 1760 CORROSIVE LIQUID,
N.O.S. (FORMIC ACID)

- Maritime transport IMDG:
- IMDG Class: 8
- UN Number: 1760
- Label: 8
- Packaging group: II
- EMS Number: F-A,S-B
- Marine pollutant: n.a.
No
- Correct technical name: CORROSIVE LIQUID, N.O.S.
(FORMIC ACID)

- Air transport ICAO-TI and IATA-DGR:
- ICAO/IATA Class: 8
- UN/ID Number: 1760
- Label: 8
- Packaging group: II
- Correct technical name: CORROSIVE LIQUID, N.O.S.
(FORMIC ACID)

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)
- Code letter and hazard designation of product: C Corrosive
- Hazard-determining components of labelling: formic acid
- Risk phrases: 34 Causes burns.
- Safety phrases:
 - 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.
 - 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 - 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 - 60 This material and its container must be disposed of as hazardous waste.
- National regulations
- Classification according to VbF: Void
- Technical instructions (air):
Class Share in %
I >30
- Water hazard class:
Water hazard class 1 (Self-assessment): slightly hazardous for water.

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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

21 Harmful in contact with skin.

23/25 Toxic by inhalation and if swallowed.

34 Causes burns.

35 Causes severe burns.

48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

- Department issuing data specification sheet:

Department cleaning and care agents
