

Material Safety Data Sheet
According to 91/155 EC

Printing date 22.11.2002

Reviewed on 22.11.2002

Trade name: ALTO Tornado

(Contd. of page 1)

transport.

- After skin contact
Instantly wash with water and soap and rinse thoroughly.
- After eye contact
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- After swallowing In case of persistent symptoms consult 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
- Measures for environmental protection: Dilute with much water.
- Measures for cleaning/collecting:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

7 Handling and storage

- Handling
- Information for safe handling: No special measures required.
- 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:

141-43-5 2-aminoethanol (5-15%)

OES: Short-term value: 15 mg/m³, 6 ppmLong-term value: 7.6 mg/m³, 3 ppm

111-76-2 2-butoxyethanol (5-15%)

OES: Short-term value: 50 ppm

Long-term value: 25 ppm

Sk, , IOELV

1310-58-3 potassium hydroxide (1-5%)

OES: Short-term value: 2 mg/m³

- 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 required.

(Contd. on page 3)

Material Safety Data Sheet
According to 91/155 EC

Printing date 22.11.2002

Reviewed on 22.11.2002

Trade name: ALTO Tornado

(Contd. of page 2)

- 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: Light brown
- Odour: Product specific
-
- Change in condition
- Melting point/Melting range: Not determined
- Boiling point/Boiling range: 100 ° C
- Flash point: Not applicable
- Ignition temperature: 240.0 ° C
- Self-inflammability: Product is not selfigniting.
- Danger of explosion: Product is not explosive.
- Vapour pressure: at 20 ° C 23.0 hPa
- Density at 20 ° C 1.064 g/cm³
- Solubility in / Miscibility with
- Water: Fully miscible
- pH-value: (10 g/l) at 20 ° C 10.5

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- Dangerous reactions: Reacts with strong acids and oxidising agents
- Dangerous products of decomposition:
Carbon monoxide
Nitrous vitriol gases

Material Safety Data Sheet
According to 91/155 EC

Printing date 22.11.2002

Reviewed on 22.11.2002

Trade name: ALTO Tornado

11 Toxicological information

- Acute toxicity:
- Primary irritant effect:
 - on the skin: Irritant to skin and mucous membranes.
 - on the eye: cause irritation
- 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: Irritant

12 Ecological information:

- General notes:

Must be neutralised before discharge into the communall sewage system
The tensides are biologically degraded according to the German Detergants Legislation(Organisation for Economic Cooperation and Development)
The product is free from halogen organic compounds (AOX)
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
Automatic seperation from oil in waste water in conjunction with highly volatile seperator tested in accordance with the Austria Standarts Institute (5105)

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 (C7) Corrosive substances.
 - Kemler Number: 80
 - UN-Number: 3267
 - Packaging group: III
 - Label: 8
 - Designation of goods: 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (POTASSIUM HYDROXIDE, 2-butoxyethanol)
- Maritime transport IMDG:
 - IMDG Class: 8
 - UN Number: 3267
 - Label: 8
 - Packaging group: III
 - EMS Number: 8-15
 - Marine pollutant: n.a.
No
 - Correct technical name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (POTASSIUM HYDROXIDE, 2-butoxyethanol)
- Air transport ICAO-TI and IATA-DGR:
 - ICAO/IATA Class: 8

(Contd. on page 5)

Material Safety Data Sheet
According to 91/155 EC

Printing date 22.11.2002

Reviewed on 22.11.2002

Trade name: ALTO Tornado

(Contd. of page 4)

- UN/ID Number: 3267
 - Label 8
 - Packaging group: III
 - Correct technical name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
(POTASSIUM HYDROXIDE, 2-butoxyethanol)
-

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: Xi Irritant
 - Risk phrases: 36/38 Irritating to eyes and skin.
 - Safety phrases:
 - 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.
 - 60 This material and its container must be disposed of as hazardous waste.
 - National regulations
 - Classification according to VbF: Void
 - 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
 - 20 Harmful by inhalation.
 - 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
 - 22 Harmful if swallowed.
 - 35 Causes severe burns.
 - 36 Irritating to eyes.
 - 36/37/38 Irritating to eyes, respiratory system and skin.
 - 36/38 Irritating to eyes and skin.
 - Department issuing data specification sheet:
Department cleaning and care agents
-