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

1.1. Product identifier
   Trade name               ESD-Polishbort
   Article number           50105

1.2. Relevant identified uses of the substance or mixture and uses advised against
   Identified uses          Cleaning/washing agents

1.3. Details of the supplier of the safety data sheet
   Company                  ESD-Center AB
                             Ringugnsgatan 8
                             21616 MALMÖ
                             Sweden
   Contact person           Stefan Sjökvist
   Telephone                +46 (0)40-36 32 40
   Cell phone               +46 (0)709-57 40 85
   E-mail                   stefan.sjokvist@esd-center.se

1.4. Emergency telephone number
   Acute cases: Call 112, request poison information.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
   Flammable liquids (Category 3), H226
   Corrosive (Category 1B), H314
   Irreversible Eye Effects (Category 1), H318
   Specific target organ toxicity - Single exposure (Category 3, Narcosis effect), H336

2.2. Label elements
   Hazard pictogram

   Signal word         Danger
   Hazard statements
   H226               Flammable liquid and vapour
   H314               Causes severe skin burns and eye damage
   H336               May cause drowsiness or dizziness
   Precautionary statements
   P264               Wash hands thoroughly after handling
   P271               Use only outdoors or in a well-ventilated area
   P301+P330+P331     IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
   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 or doctor/physician
   P363               Wash contaminated clothing before reuse
   P403+P235          Store in a well-ventilated place. Keep cool
   P405               Store locked up
2.3. Other hazards
Not indicated.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
Note that the table shows known hazards of the ingredients in pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPAN-2-OL</td>
<td>Flam Liq 2, Eye Irrit 2, STOT SE 3&lt;sup&gt;drow&lt;/sup&gt;; H225, H319, H336</td>
<td>25 - 39.99 %</td>
</tr>
<tr>
<td>DIETHYLENE GLYCOL MONOBUTYL ETHER</td>
<td>Eye Irrit 2; H319</td>
<td>25 - 39.99 %</td>
</tr>
<tr>
<td>2-AMINOETHANOL</td>
<td>Acute Tox 4&lt;sub&gt;dermal&lt;/sub&gt;, Acute Tox 4&lt;sub&gt;oral&lt;/sub&gt;, Acute Tox 4&lt;sub&gt;vapour&lt;/sub&gt;, Skin Corr 1B; H312, H302, H332, H314</td>
<td>7 - 9.99 %</td>
</tr>
<tr>
<td>POTASSIUM HYDROXIDE</td>
<td>Met Corr 1, Acute Tox 4&lt;sub&gt;oral&lt;/sub&gt;, Skin Corr 1A; H290, H302, H314</td>
<td>0.2 - 0.249 %</td>
</tr>
</tbody>
</table>

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

SECTION 4: First aid measures

4.1. Description of first aid measures
Generally
Immediately call a POISON CENTER or doctor/physician.
Contact a physician even if symptoms do not arise immediately. Preventative treatment against life-threatening deterioration (pulmonary oedema) may be immediately required.
Never attempt to administer liquid, or anything else, to an unconscious person via the mouth.
Flush contaminated parts of the body immediately with large quantities of water. In case of large injuries, larger than the palm of a hand, or if the the face has been exposed to the product, transport the person to hospital immediately.
Never leave a injured person alone. Their condition may rapidly worsen, sometimes several hours after the poisoning.
Please note that the injured person's judgement may be impaired. Call for assistance in the application of necessary force.

Upon breathing in
Please contact your doctor even without immediate symptoms. Preventive treatment against life threatening aggravation (pulmonary oedema) may need to be initiated immediately.
Bring the injured person out into fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult let trained personnel administer oxygen. Let the injured person rest in a warm place with fresh air and seek medical advice immediately.

Upon eye contact
Flush immediately with luke-warm water for 15 - 20 minutes with wide-open eyes. Transport the injured person to a hospital immediately.
Remove contact lenses immediately if possible.
Remove solid particles.
Important! Also flush during transport to hospital (eye specialist).

Upon skin contact
Remove contaminated clothes.
Wash the skin with soap and water.
If symptoms occur, contact a physician.
Upon ingestion
Immediately contact a doctor (Emergency phone 112).
Rinse mouth out thoroughly first with water, then SPIT OUT the rinse water. Drink at least half a litre of water and seek medical advice. DO NOT INDUCE VOMITING.

4.2. Most important symptoms and effects, both acute and delayed

Generally
Cough, dryness and irritation of the nose and throat, headache, dizziness, weakness, fever, chills, and chest pain; On severe exposures: tracheo-bronchitis, pneumonitis, and pulmonary edema.
Chemical burns may occur.

Upon breathing in
Risk of aspiration, resulting in chemical pneumonitis.
In case of serious poisoning, the injured need to be subject to medical observation for at least 48 hours, due to the risk of pulmonary oedema.
May cause drowsiness or disorientation.
Affects the judgement.

Upon eye contact
Risk of permanent eye damage.

Upon skin contact
Corrosive wounds.

Upon ingestion
Ingestion triggers corrosion in oral cavity and pharynx, nausea and abdominal pain.

4.3. Indication of any immediate medical attention and special treatment needed
Symptomatic treatment.
If the injured person is unconscious or drowsy, place them in the recovery position.
Symptoms of poisoning may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing agents
All normal extinguishing agents may be used.

Unsuitable extinguishing agents
Among common extinguishing agents there are none that are overtly unsuitable.

5.2. Special hazards arising from the substance or mixture
Combustible liquid, but one which is difficult to ignite.
Produces fumes containing harmful gases (carbon monoxide and carbon dioxide) when burning, and, in case of incomplete combustion, aldehydes and other toxic, harmful, irritant or environmentally harmful substances.
On contact with metals hydrogen gas may form, which can be explosive on being mixed with air.
Emits flammable vapours which may form an explosive mixture with air.
Note that the extinguishing water may contain toxic substances or other hazardous substances.
Water used for extinguishing may be highly corrosive.

5.3. Advice for fire-fighters
Any extinguishing should be executed from a good distance, due to the development of intense heat.
In case of fire use a respirator mask.
When extinguishing fire, wear total-coverage clothing which protects against corrosive substances.
Protective measures should be taken regarding other material at the site of the fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
In case of spillage in protected water, call the emergency services immediately, tel. 112 (in Europe).
Switch off equipment which has an exposed flame, glows, or has a heat source of some other kind.
Note that the rinsing-water may be corrosive.
Avoid inhalation and exposure to skin and eyes.
Upon small spillage < 5 kg. Evacuate the area and ventilate fumes.
Gas mask with an A type filter (brown), or a dust filter IIb (P2), may be required when decontaminating spillage.
Chemical protection suits should be worn for all salvage and decontamination work.

6.2. Environmental precautions
Avoid emissions into soil, water or air.
Avoid discharge into sewers.
Dam up the spillage to prevent it reaching street sewers or flowing into the ground.
6.3. Methods and material for containment and cleaning up
Clean-up of repeated spillages, or larger spillages of this product, should be executed by professional decontamination workers. Residues left behind after cleaning shall be treated as hazardous waste. For further information, contact the local authority sanitisation works. Present this safety data sheet.
Wash off with large quantities of water (50-100 volume parts). Dry up afterwards. To be collected with caution and transported to a waste disposal facility. To neutralise discharge, contact the emergency services. Present this safety data sheet.

6.4. Reference to other sections
Discharge of this product may jeopardize the tenacity of the building and other construction material, causing buildings to collapse.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Store this product separately from food items and keep it out of the reach of children and pets. Do not eat, drink or smoke in premises where this product is handled. When working with dangerous substances a fume cupboard ought to be used, or else utilise a space which is well ventilated. Work in order to avoid spillage. If spillage does occur, address it immediately in accordance with the directions specified in Section 6 of this safety data sheet. Open fires, hot objects, spark formation, or other sources of ignition, are not allowed in the premises where this product is handled. Prevent build up of static electricity by utilising a semi-conducting floor and shoe soles and keep humidity above 50%.

7.2. Conditions for safe storage, including any incompatibilities
Store in a well ventilated cupboard approved for bases, not above eye-level. The product should be stored in a manner which prevents hazards to health and the environment. Avoid exposure to humans and animals and do not discharge the product in a sensitive environment. This product should be stored well out of reach of young children and kept safely apart from products intended for consumption. Store only in the original package. Do not store above normal room temperature. Larger quantities are to be stored in areas approved for the storage of inflammable liquids.

7.3. Specific end uses
Not relevant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
8.1.1. National limit values
PROPA N-2-OL

United Kingdoms (EH40/2005)
Time-weighted-average exposure limit (TWA) 400 ppm / 999 mg/m³
Short term exposure limit (STEL) 500 ppm / 1250 mg/m³

DIETHYLENE GLYCOL MONOBUTYL ETHER

United Kingdoms (EH40/2005)
Time-weighted-average exposure limit (TWA) 10 ppm / 67.5 mg/m³
Short term exposure limit (STEL) 15 ppm / 101.2 mg/m³

2-AMINOETHANOL

United Kingdoms (EH40/2005)
Time-weighted-average exposure limit (TWA) 1 ppm / 2.5 mg/m³
Short term exposure limit (STEL) 3 ppm / 7.6 mg/m³

POTASSIUM HYDROXIDE

United Kingdoms (EH40/2005)
Short term exposure limit (STEL) 2 mg/m³
<table>
<thead>
<tr>
<th>Substance</th>
<th>Type of exposure</th>
<th>Route of exposure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPAN-2-OL</td>
<td>Consumer</td>
<td>Chronic</td>
<td>Inhalation</td>
</tr>
<tr>
<td></td>
<td>Worker</td>
<td>Chronic</td>
<td>Dermal</td>
</tr>
<tr>
<td></td>
<td>Worker</td>
<td>Chronic</td>
<td>Inhalation</td>
</tr>
<tr>
<td></td>
<td>Consumer</td>
<td>Chronic</td>
<td>Oral</td>
</tr>
<tr>
<td></td>
<td>Consumer</td>
<td>Chronic</td>
<td>Dermal</td>
</tr>
<tr>
<td>2-AMINOETHANOL</td>
<td>Consumer</td>
<td>Chronic</td>
<td>Inhalation</td>
</tr>
<tr>
<td></td>
<td>Worker</td>
<td>Chronic</td>
<td>Dermal</td>
</tr>
<tr>
<td></td>
<td>Worker</td>
<td>Chronic</td>
<td>Inhalation</td>
</tr>
<tr>
<td></td>
<td>Worker</td>
<td>Chronic</td>
<td>Inhalation</td>
</tr>
<tr>
<td></td>
<td>Consumer</td>
<td>Chronic</td>
<td>Inhalation</td>
</tr>
<tr>
<td></td>
<td>Consumer</td>
<td>Chronic</td>
<td>Oral</td>
</tr>
<tr>
<td></td>
<td>Consumer</td>
<td>Chronic</td>
<td>Dermal</td>
</tr>
<tr>
<td>POTASSIUM HYDROXIDE</td>
<td>Worker</td>
<td>Chronic</td>
<td>Inhalation</td>
</tr>
<tr>
<td></td>
<td>Consumer</td>
<td>Chronic</td>
<td>Inhalation</td>
</tr>
</tbody>
</table>

PNEC

<table>
<thead>
<tr>
<th>Substance</th>
<th>Environmental protection target</th>
<th>PNEC value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPAN-2-OL</td>
<td>Fresh water</td>
<td>140.9 mg/l</td>
</tr>
<tr>
<td></td>
<td>Freshwater sediments</td>
<td>552 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>140.9 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine sediments</td>
<td>552 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Microorganisms in sewage treatment</td>
<td>2251 mg/l</td>
</tr>
<tr>
<td></td>
<td>Soil (agricultural)</td>
<td>28 mg/kg</td>
</tr>
<tr>
<td>2-AMINOETHANOL</td>
<td>Environmental protection target</td>
<td>PNEC value</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>0.085 mg/l</td>
</tr>
<tr>
<td></td>
<td>Freshwater sediments</td>
<td>0.425 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.0085 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine sediments</td>
<td>0.0425 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Microorganisms in sewage treatment</td>
<td>100 mg/l</td>
</tr>
<tr>
<td></td>
<td>Soil (agricultural)</td>
<td>0.035 mg/kg</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

In terms of minimizing risks, attention must be paid to both the physical and health hazards (see Sections 2, 10 and 11) of this product according to EU directives 89/391 and 98/24 and national occupational legislation.

8.2.1. Appropriate engineering controls
Handle in premises which have modern ventilation standards.
Emergency showers and eye-rinsing facilities must be available at the workplace.
Handle in a fume cupboard or in a space which is equally safe.

**Eye/face protection**

Never use contact lenses when working with this substance.
Use protective glasses, safety goggles, or a visor.

**Skin protection**

Protect all exposed skin from coming into contact with the product.
Use suitable protective clothing.
Use protective gloves of butyl rubber, Viton or fluorine rubber, or get advice from an occupational medical expert about alternative materials. Show this safety data sheet.
Where there is a risk of this corrosive substance splashing, use protective clothing.

**Respiratory protection**

A breathing mask of the A filter (brown) type, or a IIb (P2) dust filter may be required.

8.2.3. **Environmental exposure controls**

For limitation of environmental exposure, see Section 12.

**SECTION 9: Physical and chemical properties**

9.1. **Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Form: liquid. Colour: blue.</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>weak smell</td>
</tr>
<tr>
<td><strong>Odour threshold</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>11.5 - 12.5</td>
</tr>
<tr>
<td><strong>Melting point/freezing point</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>Initial boiling point and boiling range</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>50.0 °C</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Upper/lower flammability or explosive limits</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>0.990 kg/L</td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Not indicated</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

9.2. **Other information**

No data available

**SECTION 10: Stability and reactivity**

10.1. **Reactivity**

May be corrosive to metals.
Reacts violently with acids.
Vapour can create explosive mixtures with air.

10.2. **Chemical stability**

The product is stable at normal storage and handling conditions.

10.3. **Possibility of hazardous reactions**

May emit volatile, flammable vapours. Avoid handling close to heat or ignition sources.
Reacts violently with strong acids.
Reacts with certain metals under development of flammable and explosive hydrogen gas.

10.4. **Conditions to avoid**

Avoid heat, sparks and open flames.

10.5. **Incompatible materials**

Avoid contact with acids.
Avoid contact with strong oxidizing agents.
Avoid contact with light metals.
10.6. Hazardous decomposition products
Emits hydrogen on contact with some metals.
In case of fire corrosive and poisonous gases may develop.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
The main risk with this product is its corrosive properties.
Note, the product will affect discernment.

Acute toxicity
The product is not classified as acutely toxic, but it does contain low levels of hazardous substances.

**PROPAN-2-OL**
- LD50 rabbit 24h: 15800 mg/kg Dermally
- LD50 rat 24h: > 12800 mg/kg Dermally
- LC50 rat 4h: 72.6 mg Inhalation
- LC50 rat 4h: 64000 ppmV Inhalation
- LC50 rat 8h: 16000 ppmV Inhalation
- LD50 rat 24h: 5045 mg/kg Orally

**DIETHYLENE GLYCOL MONOBUTYL ETHER**
- LD50 rabbit 24h: 2700 mg/kg Dermally
- LD50 rat 24h: 5660 mg/kg Orally

**2-AMINOETHANOL**
- LD50 rabbit 24h: 1025 mg/kg Dermally
- LD50 rat 24h: 1720 mg/kg Orally

**POTASSIUM HYDROXIDE**
- LD50 rat 24h: 333 mg/kg Orally

Skin corrosion/irritation
The product is corrosive.

Serious eye damage/irritation
Causes severe eye burns.

Respiratory or skin sensitisation
Eczema (atopical or unidentified) may occur.

Germ cell mutagenicity
To the best of our knowledge, no mutagenic effects have been reported for this product.

Carcinogenicity
The criteria for classification cannot be considered fulfilled based on available data.

Reproductive toxicity
To the best of our knowledge, no reproductive toxicity has been reported for this product.

STOT-single exposure
Affects the judgement even in low doses.
May cause drowsiness or disorientation.
Irritation or burns may occur in the respiratory tract if inhaled or ingested.

STOT-repeated exposure
Risk for pulmonary edema after six hours to a few days.

Aspiration hazard
Ingestion of the product may lead to aspiration, and as a result chemical pneumonia.

SECTION 12: Ecological information

12.1. Toxicity
The product is, or contains, a substance which influences behaviour. Avoid discharge to places frequented by animals.
Discharge of this product into water affects pH. Avoid large discharges.
At the quantities with which this product is used, environmental effects are limited to the local environment.

**PROPAN-2-OL**
- LC50 fathead minnow (Pimephales promelas) 96h: 9640 mg/L
- LC50 Freshwater water flea (Daphnia magna) 48h: 2285 mg/L
- EC50 Freshwater water flea (Daphnia magna) 48 h: 13299 mg/l
- LC50 Fish 96h: 1000 mg/l
- EC50 Fish 96h: 10 - 100 mg/l
- EC50 Algae 24h: 1 - 10 mg/l

**DIETHYLENE GLYCOL MONOBUTYL ETHER**
- LC50 Bluegill (Lepomis macrochirus) 96h: 1300 mg/l
- LC50 Fish 48h: > 100 mg/l
EC50 Freshwater water flea (Daphnia magna) 72h: > 100 mg/l
IC50 Algae 72h: > 100 mg/l

2-AMINOETHANOL
LC50 Rainbow trout (Oncorhynchus mykiss) 96h: 150 mg/L
EC10 Bacteria 17h: 87 mg/l
LC50 Bluegill (Lepomis macrochirus) 96h: 329 mg/l
EC50 Algae 72 h: 15 mg/l
EC50 Freshwater water flea (Daphnia magna) 24h: 120 - 140 mg/L

POTASSIUM HYDROXIDE
EC50 Freshwater water flea (Daphnia magna) 48 h: 40 - 240 mg/l
LC50 Fish 96h: 125 mg/l
LC50 mosquitofish (Gambusia affinis) 96h: 80 mg/kg

12.2. Persistence and degradability
No information about persistence or degradability exists but there is no reason to suppose that the product is persistent.

12.3. Bioaccumulative potential
No information exists on bioaccumulation, but there is no cause for concern in respect of this.

12.4. Mobility in soil
No information about mobility in the nature exists but there is no reason to suppose the product to be ecologically harmful because of this.

12.5. Results of PBT and vPvB assessment
Not indicated.

12.6. Other adverse effects
This product degrades rapidly but large emission within a short period of time may be harmful to the local environment. During large spills the pH can increase very significantly locally and cause toxic effects to organisms living in water.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste handling of the product
This product is not usually recycled.
The product is flammable and its waste shall therefore, if it is not treated in order to eliminate this risk, be considered to be dangerous.
The product is corrosive and the waste thereof should be considered hazardous (if this is not neutralised). Also take local regulations for dealing with waste into account.
Final disposal of this product should be carried out by a company authorised to deal with hazardous waste. See also national waste regulations.

Classification according to 2006/12
Recommended LoW-code: 20 01 15 Alkalines
20 01 29 detergents containing hazardous substances

SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

14.1. UN number
2920

14.2. UN proper shipping name
CORROSIVE LIQUID, FLAMMABLE, N.O.S. (PROPAN-2-OL, 2-AMINOETHANOL, POTASSIUM HYDROXIDE)

14.3. Transport hazard class(es)
Class
8: Corrosive substances

Classification code (ADR/RID)
CF1: Corrosive substances, flammable: Liquid

Subsidiary risk (IMDG)
IMDG-class 3 (Flammable liquid)

Labels
14.4. Packing group
Packing group II
14.5. Environmental hazards
Not applicable
14.6. Special precautions for user
Tunnel restrictions
Tunnel category: D/E
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable
14.8 Other transport information
Transport category: 2; Highest total quantity per transported unit 333 kg or liters
Stowage category not indicated (IMDG)

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Not indicated.
15.2. Chemical safety assessment
Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

SECTION 16: Other information
16a. Indication of where changes have been made to the previous version of the safety data sheet
Revisions of this document
Earlier versions
2012-10-18 Revisions of this document has, where not otherwise stated, been caused by changes in the regulations
16b. Legend to abbreviations and acronyms used in the safety data sheet
Full texts for Hazard Class and Category Code mentioned in section 3
Flam Liq 2 Flammable liquids (Category 2)
Eye Irrit 2 Irritates eyes (Category 2)
STOT SE 3drow Specific target organ toxicity - Single exposure (Category 3, Narcosis effect)
Acute Tox 4dermal Acute toxicity (Category 4 skin)
Acute Tox 4oral Acute toxicity (Category 4 oral)
Acute Tox 4vapour Acute toxicity (Category 4 vapours)
Skin Corr 1B Corrosive (Category 1B)
Met Corr 1 May be corrosive to metals (Category 1)
Skin Corr 1A Corrosive (Category 1A)

Explanations of the abbreviations in Section 14
ADR European Agreement concerning the International Transport of Dangerous Goods by Road
RID Regulations concerning the International Transport of Dangerous Goods by Rail
IMDG International Maritime Dangerous Goods Code
ICAO International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)
IATA The International Air Transport Association
Tunnel restriction code: D/E; Transport by bulk or via tank: Passage forbidden through tunnels of category D and E, Other transportation means: Passage forbidden through tunnels of category E
Transport category: 2; Highest total quantity per transported unit 333 kg or liters
16c. Key literature references and sources for data
Sources for data
Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I, as updated to 2017-07-27.
Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

EH40/2005  Workplace exposure limits
89/391  COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work
98/24  COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)
2006/12  DIRECTIVE 2006/12/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 April 2006 on waste

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification
Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I, where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI.

16e. List of relevant hazard statements and/or precautionary statements
Full texts for hazard statements mentioned in section 3
H225  Highly flammable liquid and vapour
H319  Causes serious eye irritation
H336  May cause drowsiness or dizziness
H312  Harmful in contact with skin
H302  Harmful if swallowed
H332  Harmful if inhaled
H314  Causes severe skin burns and eye damage
H290  May be corrosive to metals

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment
Warning for misuse
This product can cause severe injuries if used improperly. Read and follow carefully the instructions in this safety sheet and other appropriate risk information. At professional use the employer is responsible for the staff being well aware of the risks.

Other relevant information

Editorial information
This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se