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

1.1 Product identifier
   Trade name
   EMKARATE

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Relevant identified uses of the substance or mixture
   Lubricant for compressors for professional use in ultra-low temperature freezers.
   Uses advised against
   No data available.

1.3 Details of the supplier of the safety data sheet
   Address
   Eppendorf AG
   Barkhausenweg 1
   D-22339 Hamburg
   Telephone no. +49 40 53801-0
   Information provided by / telephone
   Eppendorf Application-Hotline
   Tel.: +49 1803 66 67 89
   Fax: +49 4053 99 01 25
   email: support@eppendorf.com
   Advice on Safety Data Sheet
   sdb_info@umco.de

1.4 Emergency telephone number
   For medical advice (in German and English):
   +49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification information
   This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP).

2.2 Label elements
   Not relevant

2.3 Other hazards
   No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances
   Not applicable. The product is not a substance.

3.2 Mixtures
   Chemical characterization
   Mixture (preparation)
   Hazardous ingredients
   This product does not contain substances to be mentioned according to EU Regulation No 1907/2006 (REACH), annex II.
SECTION 4: First aid measures

4.1 **Description of first aid measures**

- **General information**
  - Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.
- **After inhalation**
  - Remove affected person from the immediate area. Ensure supply of fresh air.
- **After skin contact**
  - Wash off with soap and water. Get medical attention if pain still persists.
- **After eye contact**
  - Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Get immediate ophthalmic treatment.
- **After ingestion**
  - Do not induce vomiting - aspiration hazard. Never give anything by mouth to an unconscious person. If individual is drowsy or unconscious, place in recovery position (on left side, with head down). By continuous complaints consult a physician.

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

No data available.

4.3 **Indication of any immediate medical attention and special treatment needed**

Treat symptomatically

SECTION 5: Firefighting measures

5.1 **Extinguishing media**

- **Suitable extinguishing media**
  - Carbon dioxide; Dry chemical extinguisher; Water spray jet; Water mist
- **Unsuitable extinguishing media**
  - High power water jet

5.2 **Special hazards arising from the substance or mixture**

Product floats on water.

5.3 **Advice for firefighters**

Use self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 **Personal precautions, protective equipment and emergency procedures**

- **For non-emergency personnel**
  - Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation.
- **For emergency responders**
  - No data available. Personal protective equipment (PPE) - see Section 8.

6.2 **Environmental precautions**

Do not discharge into the drains/surface waters/groundwater.

6.3 **Methods and material for containment and cleaning up**

Pick up with absorbent material (e.g., sand, sawdust, general-purpose binder). Send in suitable containers for recovery or disposal.

6.4 **Reference to other sections**

Information regarding personal protective measures, see chapter 8. Information regarding waste disposal, see chapter 13.
SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Ensure adequate ventilation.

General protective and hygiene measures
Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash soiled clothing. Wash hands before breaks and after work.

Advice on protection against fire and explosion
No special measures necessary.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels
Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original one.

Advice on storage assembly
Do not store together with: Oxidizing agents; Acids; Bases

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
No parameters available for monitoring.

8.2 Exposure controls

Appropriate engineering controls
No data available.

Personal protective equipment

Respiratory protection
In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection
Safety glasses recommended

Hand protection
Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific workstation suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer’s instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material: neoprene
Other work clothing.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Form/Colour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>light yellow</td>
<td></td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Odour</td>
<td>mild</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH value</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>Value &gt; 250 °C</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition point / decomposition range</td>
<td>No data available</td>
</tr>
<tr>
<td>Pour point</td>
<td>Value -52 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Value &gt; 240 °C</td>
</tr>
<tr>
<td>Method</td>
<td>Cleveland open cup</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Value 390 °C</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Value 0.1 Torr</td>
</tr>
<tr>
<td>Reference temperature</td>
<td>20 °C</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Value 0.995</td>
</tr>
<tr>
<td>Reference temperature</td>
<td>20 °C</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Remarks insoluble</td>
</tr>
</tbody>
</table>
Solubility(ies)
No data available

Partition coefficient: n-octanol/water
No data available

Viscosity
<table>
<thead>
<tr>
<th>Value</th>
<th>18.9 mm²/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference temperature</td>
<td>40 °C</td>
</tr>
</tbody>
</table>

9.2 Other information

Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions
Dangerous reactions are not to be expected when handling product according to its intended use.

10.4 Conditions to avoid
None known

10.5 Incompatible materials
Oxidizing agents; strong bases; strong acids

10.6 Hazardous decomposition products
Carbon monoxide and carbon dioxide
### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute inhalational toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproduction toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No data available</td>
</tr>
<tr>
<td>Delayed and immediate effects</td>
<td>Product specific toxicological data are not available.</td>
</tr>
</tbody>
</table>

**Other information**

The product was classified on the basis of the calculation procedure of the regulation (EC) No 1272/2008 (CLP).
SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Toxicity to fish (acute)</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to fish (chronic)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to Daphnia (acute)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to Daphnia (chronic)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to algae (acute)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to algae (chronic)</td>
<td>No data available</td>
</tr>
<tr>
<td>Bacteria toxicity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>Value</th>
<th>Duration</th>
<th>Method</th>
<th>Evaluation</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Product Name</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>EMKARATE</td>
<td>76</td>
<td>28</td>
<td>OECD 301 B</td>
<td>readily biodegradable</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

12.7 Other information

Do not discharge into the drains or waters and do not store on public depositories.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

<table>
<thead>
<tr>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.</td>
</tr>
<tr>
<td>dispose of in accordance with local regulation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.</td>
</tr>
<tr>
<td>Packaging that cannot be cleaned should be disposed of in agreement with the regional waste disposal company.</td>
</tr>
</tbody>
</table>
SECTION 14: Transport information

14.1 Transport ADR/RID/ADN
The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG
The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA
The product is not subject to ICAO-TI / IATA regulations.

14.4 Other information
No data available.

14.5 Environmental hazards
Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user
No data available.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not relevant

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation
According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances
This product is not subject to Part 1 or 2 of Annex I.

Other regulations
Adhere to the national sanitary and occupational safety regulations when using this product.

15.2 Chemical safety assessment
No data available.

SECTION 16: Other information

Sources of key data used to compile the data sheet:
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.
Department issuing safety data sheet
UMCO Umwelt Consult GmbH
Georg-Wilhelm-Str. 183, D-21107 Hamburg
Tel.: +49 40 / 79 02 36 300 Fax: +49 40 / 79 02 36 357 e-mail: umco@umco.de

This information is based on our present knowledge and experience. The safety data sheet describes products with a view to safety requirements. It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

Document protected by copyright. Alterations or reproductions require the express written permission of UMCO Umwelt Consult GmbH.