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

1.1 Product identifier

Trade name: Mereta 320

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

Application of the substance / the preparation: Lubricating oil

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Alfa Laval Tumba AB
Hans Stahles väg 7
S-147 80 TUMBA
SWEDEN
sds.question@alfalaval.com

Contact details for all countries are continually updated on our website.
Please visit www.alfalaval.com to access the information.

* The latest version of Alfa Laval's SDS is available on our website.

* Further information obtainable from: sds.question@alfalaval.com

1.4 Emergency telephone number:
For immediate, life-threatening emergencies, call 999

For health advice and information (24h) dial 111 (NHS direct)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

* Information concerning particular hazards for human and environment:
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

* Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

2.2 Label elements

* Labelling according to EU guidelines:
Observe the general safety regulations when handling chemicals.
The product has been marked in accordance with EU Directives / respective national laws.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

* Risk phrases:
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

* Safety phrases:
60 This material and its container must be disposed of as hazardous waste.
61 Avoid release to the environment. Refer to special instructions/safety data sheets.
Safety data sheet
according to 1907/2006/EC, Article 31

Trade name: Mereta 320

2.3 Other hazards
Information on high pressure equipment:
Accidental speed injection under the skin of this type of material can cause serious injury. Seek immediately medical attention if an accident of this nature occur. It is possible that the wound at the injection site does not look so severe at first sight, but it is not treated it can lead to malformation or amputation of the affected limb.

- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- 3.2 Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

| CAS: 128-37-0 | 2,6-di-tert-butyl-p-cresol | ≤ 2.5% |
| EINECS: 204-881-4 | Xi R36/38; N R50/53 | Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319 |

| CAS: 80939-62-4 | Amines, C11-14-branched alkyl, monoethyl and dihexyl phosphates | ≤ 2.5% |
| EINECS: 279-632-6 | Xi R36/38; N R51/53 | Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319 |

| CAS: 110-25-8 | Glycine, N-methyl-N-(1-oxo-9-octadecenyl)-(Z)-Xn R20; Xi R38-41; N R50 | ≤ 2.5% |
| EINECS: 203-749-3 | Eye Dam. 1, H318; Aquatic Acute 1, H400; Acute Tox. 4, H332; Skin Irrit. 2, H315 |

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

SECTION 4: First aid measures

- 4.1 Description of first aid measures
- General information:
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact:
Wash with water and soap.
Product in use under high pressure that has been forced under the skin, s is a serious situation that requires IMMEDIATE hospital treatment.
- After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
Contact a doctor/physician.

- 4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

- 4.3 Indication of any immediate medical attention and special treatment needed
Information on high pressure equipment:
Accidental speed injection under the skin of this type of material can cause serious injury. Seek immediately medical attention if an accident of this nature occurs. Even if the wound at the injection
SECTION 5: Firefighting measures

- 5.1 Extinguishing media
  - Suitable extinguishing agents:
    - Foam
    - Fire-extinguishing powder
    - Carbon dioxide
    - Use fire extinguishing methods suitable to surrounding conditions.

- 5.2 Special hazards arising from the substance or mixture
  - Formation of toxic gases is possible during heating or in case of fire.
  - In case of fire, the following can be released:
    - Carbon monoxide (CO)
    - Hydrocarbons
    - Aldehyde

- 5.3 Advice for firefighters
  - Protective equipment: Mouth respiratory protective device.
  - Additional information: Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  - Do not breathe vapour.
  - Particular danger of slipping on leaked/spilled product.

- 6.2 Environmental precautions:
  - Prevent seepage into sewage system, workpits and cellars.
  - Do not allow product to reach sewage system or any water course.
  - Inform respective authorities in case of seepage into water course or sewage system.

- 6.3 Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Send for recovery or disposal in suitable receptacles.

- 6.4 Reference to other sections
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
  - Avoid the formation of oil haze.
  - When using do not eat, drink or smoke.
  - See Section 8 for information on personal protection equipment.

- Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.

- 7.2 Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles:
      - Store in a dry place.
      - Keep container tightly closed.
SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.

- 8.1 Control parameters

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>128-37-0 2,6-di-tert-butyl-p-cresol</td>
</tr>
<tr>
<td>WEL                             Long-term value: 10 mg/m³</td>
</tr>
<tr>
<td>Oil mist including oil smoke</td>
</tr>
<tr>
<td>EXPOSURE CONTROLS               Long-term value: 1 mg/m³</td>
</tr>
<tr>
<td>Reference: GESTIS United Kingdom</td>
</tr>
</tbody>
</table>

- Additional information: The lists valid during the making were used as basis.

- 8.2 Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:
    Keep away from foodstuffs, beverages and feed.
    Avoid contact with the eyes and skin.
  - Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.
  - Protection of hands:
    The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

  Protective gloves

  - Material of gloves Nitrile rubber, NBR
  - 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

  - Body protection:
    Protective work clothing
    Oil resistant protective clothing

(Contd. of page 5)
<table>
<thead>
<tr>
<th>SECTION 9: Physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9.1 Information on basic physical and chemical properties</strong></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
</tr>
<tr>
<td>Form: Fluid</td>
</tr>
<tr>
<td>Colour: Transparent</td>
</tr>
<tr>
<td>Odour: Weak, characteristic</td>
</tr>
<tr>
<td>Odour threshold: Not determined.</td>
</tr>
<tr>
<td>pH-value: Not determined.</td>
</tr>
<tr>
<td>Change in condition</td>
</tr>
<tr>
<td>Melting point/Melting range: -42 °C</td>
</tr>
<tr>
<td>Boiling point/Boiling range: Undetermined.</td>
</tr>
<tr>
<td>Flash point: &gt; 250 °C</td>
</tr>
<tr>
<td>Flammability (solid, gaseous): Not applicable.</td>
</tr>
<tr>
<td>Ignition temperature:</td>
</tr>
<tr>
<td>Decomposition temperature: Not determined.</td>
</tr>
<tr>
<td>Self-igniting: Product is not self-igniting.</td>
</tr>
<tr>
<td>Danger of explosion: Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits:</td>
</tr>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
<tr>
<td>Vapour pressure:</td>
</tr>
<tr>
<td>Not determined. &lt;0,01 kPa</td>
</tr>
<tr>
<td>Density at 20 °C:</td>
</tr>
<tr>
<td>0.858 g/cm³</td>
</tr>
<tr>
<td>Relative density: Not determined.</td>
</tr>
<tr>
<td>Vapour density: Not determined.</td>
</tr>
<tr>
<td>Evaporation rate: Not determined.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with water: Insoluble.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water): log Pow &gt;3 &gt;3</td>
</tr>
<tr>
<td>Viscosity: Dynamic: Not determined.</td>
</tr>
<tr>
<td>Kinematic at 20 °C: 320 mm²/s</td>
</tr>
<tr>
<td>Solvent content:</td>
</tr>
<tr>
<td>Organic solvents: 0.0 %</td>
</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

- 10.1 Reactivity
- 10.2 Chemical stability
  Stable under normal temperature conditions and under recommended usage and storage.
- Thermal decomposition / conditions to be avoided:
  No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions Reacts with strong oxidizing agents.
- 10.4 Conditions to avoid Keep away from sources of ignition - No smoking.
- 10.5 Incompatible materials: Reacts with strong oxidizing agents.
- 10.6 Hazardous decomposition products: No further information, refer to section 5.

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
  - Acute toxicity:
    - Oral LD50 890 mg/kg (rat)
  - Primary irritant effect:
    - on the skin: Prolonged and/or repeated skin contact combined with poor personal hygiene may cause inflammation of the skin in the form of dermatitis, eczema and oil acne.
      Product in use under high pressure that has been forced under the skin, is a serious situation that requires IMMEDIATE hospital treatment.
    - on the eye: Contact with eyes may result in mild irritation.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    - The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
    - When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
    - Acute effects (acute toxicity, irritation and corrosivity)
      Low acute toxicity, but aspiration following ingestion and vomiting may cause severe and potentially fatal chemical pneumonia.

SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity:
  Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 12.2 Persistence and degradability The product is not easily, but potentially biodegradable.
- 12.3 Bioaccumulative potential
  Due to the distribution coefficient n-octanol/water an accumulation in organisms is possible.
- 12.4 Mobility in soil Low solubility, product floats on water. Absorbs to soil particles.
Trade name: Mereta 320

(Contd. of page 6)

- Additional 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 course or sewage system.
  - 12.5 Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - 12.6 Other adverse effects
    Spills may form a film on the water surface. This film may cause physical damage to aquatic organisms and reduce oxygen transfer.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
  - Recommendation
    Must not be disposed together with household garbage. Do not allow product to reach sewage system.
    Delivery of waste oil to officially authorized collectors only.
  - European waste catalogue
    The European Waste Catalogue waste codes do not refer to product but to origin. The manufacturer is therefore unable to quote a waste code for products which are used in various industries. The codes shown should be regarded as a recommendation to the user.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 00 00</td>
<td>OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)</td>
</tr>
<tr>
<td>13 02 00</td>
<td>waste engine, gear and lubricating oils</td>
</tr>
<tr>
<td>13 02 06*</td>
<td>synthetic engine, gear and lubricating oils</td>
</tr>
<tr>
<td>13 00 00</td>
<td>OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)</td>
</tr>
<tr>
<td>13 02 00</td>
<td>waste engine, gear and lubricating oils</td>
</tr>
<tr>
<td>13 02 08*</td>
<td>other engine, gear and lubricating oils (1) For the purpose of this list of wastes, PCBs will be defined as in Directive 96/59/EC. 16.2.2001 L 47/21 Official Journal of the European Communities EN</td>
</tr>
<tr>
<td>12 00 00</td>
<td>WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS</td>
</tr>
<tr>
<td>12 01 00</td>
<td>wastes from shaping and physical and mechanical surface treatment of metals and plastics</td>
</tr>
<tr>
<td>12 01 07*</td>
<td>mineral-based machining oils free of halogens (except emulsions and solutions)</td>
</tr>
</tbody>
</table>

- Uncleaned packaging:
  - Recommendation:
    Disposal must be made according to official regulations.
    Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport Information

- 14.1 UN-Number
- ADR, ADN, IMDG, IATA: Void

(Contd. on page 8)
### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - EU Regulation (EC) no. 1907/2006 (REACH)
  - EU regulation (EC) no 1272/2008 (CLP)
  - EC DIRECTIVE 2008/98/EC (waste)

- **15.2 Chemical safety assessment**: A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**LIMITATION OF LIABILITY**

This document is only intended to be used as guidance as regards the risks of which we are aware that are associated with the product. Every individual who works with the product or in close proximity of it must receive suitable training. Individuals who come into contact with the product must be capable of using their own judgement as regards conditions or methods for handling, storing and using the product. Alfa Laval is not liable for demands, losses or damage of any kind that arise from flaws or deficiencies in this document or from using, handling, storing or disposing of the product unless it can be proven that Alfa Laval has acted in a grossly negligent manner. Beyond what has been agreed upon and specified in writing with Alfa Laval in the individual case, Alfa Laval makes no promises or assumes any liability, including but not limited to implicit guarantees regarding marketability or appropriateness in terms of both the information provided in this document and the product to which the information refers.

**Relevant phrases**

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.09.2013 Version number 6 Revision: 06.09.2013

Trade name: Mereta 320

H411 Toxic to aquatic life with long lasting effects.
R20 Harmful by inhalation.
R36/38 Irritating to eyes and skin.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R50 Very toxic to aquatic organisms.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Department issuing MSDS: MACC - Materials & Chemistry Centre
· * Data compared to the previous version altered.