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

1.1 Product identifier
   Trade name : EPROPOX HC 2640 B

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Use of the Substance/Mixture : Epoxy Hardener

1.3 Details of the supplier of the safety data sheet
   Company : Trelleborg Pipe Seals Duisburg GmbH
              Dr.-Alfred-Herrhausen-Allee 36
              47228 Duisburg
              Germany
   Telephone : +49 (0) 2065 999-0
   Telefax : +49 (0) 2065 999-111
   E-mail address : technic.epros@trelleborg.com

1.4 Emergency telephone number : +49 (0) 2065 999-150

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification (REGULATION (EC) No 1272/2008)
   Acute toxicity, Category 4 : H302: Harmful if swallowed.
   Skin irritation, Category 2 : H315: Causes skin irritation.
   Serious eye damage, Category 1 : H318: Causes serious eye damage.
   Reproductive toxicity, Category 2 : H361d: Suspected of damaging the unborn child.

   Classification (67/548/EEC, 1999/45/EC)
   Harmful : R22: Harmful if swallowed.
   Toxic to Reproduction Category 3 : R63: Possible risk of harm to the unborn child.
   Irritant : R36/38: Irritating to eyes and skin.

2.2 Label elements
   Labelling (REGULATION (EC) No 1272/2008)
Hazard pictograms:

Signal word: Danger

Hazard statements:
- H302: Harmful if swallowed.
- H315: Causes skin irritation.
- H318: Causes serious eye damage.
- H361d: Suspected of damaging the unborn child.

Precautionary statements:
- Prevention:
  - P201: Obtain special instructions before use.
  - P280: Wear eye protection/ face protection.
  - P280: Wear protective gloves.
  - P281: Use personal protective equipment as required.
- Response:
  - 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.

Hazardous components which must be listed on the label:
- 2-ethylhexanoic acid
- 2,4,6-tris(dimethylaminomethyl)phenol
- bis[(dimethylamino)methyl]phenol

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures
Chemical nature: Aliphatic Amine

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-ethylhexanoic acid</td>
<td>149-57-5</td>
<td>205-743-6</td>
<td>01-</td>
<td>Repr.Cat.3; R63</td>
<td>Repr. 2; H361d</td>
<td>&gt;= 50 - &lt;= 100</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

EPROPOX HC 2640 B

Version 7.0 [2.0 SDB GB] Revision Date 28.10.2014 Print Date 03.11.2014

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Label</th>
<th>Acute Toxic.</th>
<th>Skin Irr.</th>
<th>Eye Irrit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-tris(dimethylaminomethyl)phenol</td>
<td>90-72-2 202-013-9 01-2119560597-27</td>
<td>Xn; R22 Xi; R36/38</td>
<td>&gt;=30 &lt; 50</td>
<td>H302 H319</td>
<td>H319</td>
</tr>
<tr>
<td>bis[(dimethylamino)methyl]phenol</td>
<td>71074-89-0 275-162-0</td>
<td>Xn; R22 C; R34</td>
<td>H302 H314</td>
<td>&gt;=3 &lt; 5</td>
<td></td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice: Show this safety data sheet to the doctor in attendance. Keep warm and in a quiet place. Take off all contaminated clothing immediately.

If inhaled: Move to fresh air. Keep patient warm and at rest. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician. If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact: Wash off immediately with soap and plenty of water. Do NOT use solvents or thinners. If on clothes, remove clothes. Burns must be treated by a physician.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist. If easy to do, remove contact lens, if worn.

If swallowed: Do NOT induce vomiting. If a person vomits when lying on his back, place him in the recovery position. Call a physician immediately. Give small amounts of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: corrosive effects
Burn

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: No information available.
SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media:
- Carbon dioxide (CO2)
- Foam
- Dry powder
- Water mist

Unsuitable extinguishing media:
- None known.

5.2 Special hazards arising from the substance or mixture
Specific hazards during firefighting:
- The pressure in sealed containers can increase under the influence of heat.
- Cool closed containers exposed to fire with water spray.
- Hazardous decomposition products formed under fire conditions.

5.3 Advice for firefighters
Special protective equipment for firefighters:
- In the event of fire, wear self-contained breathing apparatus.
- Use personal protective equipment.

Further information:
- In the event of fire and/or explosion do not breathe fumes.
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Immediately evacuate personnel to safe areas.
- Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Personal precautions:
- Refer to protective measures listed in sections 7 and 8.
- Evacuate personnel to safe areas.
- Use personal protective equipment.
- Ensure adequate ventilation.
- Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.

6.2 Environmental precautions
Environmental precautions:
- Do not allow uncontrolled discharge of product into the environment.
- Try to prevent the material from entering drains or water courses.
- Local authorities should be advised if significant spillages cannot be contained.
6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Pick up and transfer to properly labelled containers.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours or spray mist. Avoid inhalation, ingestion and contact with skin and eyes. Wear personal protective equipment. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion: Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures: Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. To maintain product quality, do not store in heat or direct sunlight.

Further information on storage conditions: Protect from moisture.

Advice on common storage: Keep away from isocyanates. Do not store near acids. Keep away from oxidizing agents.

Other data: Stable at normal ambient temperature and pressure.

7.3 Specific end use(s)

Specific use(s): Consult the technical guidelines for the use of this substance/mixture.
SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

2-ethylhexanoic acid

| Exposure route                  | End Use: Consumers
|--------------------------------|---------------------------------
| Potential health effects        | Long-term systemic effects       |
| Value                          | 2,5 mg/kg                       |

| End Use: Workers
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential health effects</td>
</tr>
<tr>
<td>Value</td>
</tr>
</tbody>
</table>

| End Use: Consumers
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential health effects</td>
</tr>
<tr>
<td>Value</td>
</tr>
</tbody>
</table>

| End Use: Workers
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential health effects</td>
</tr>
<tr>
<td>Value</td>
</tr>
</tbody>
</table>

| End Use: Consumers
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential health effects</td>
</tr>
<tr>
<td>Value</td>
</tr>
</tbody>
</table>

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

2-ethylhexanoic acid

<table>
<thead>
<tr>
<th>Environment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewage treatment plant</td>
<td>71,7 mg/l</td>
</tr>
<tr>
<td>Fresh water</td>
<td>0,36 mg/l</td>
</tr>
<tr>
<td>Intermittent releases</td>
<td>0,493 mg/l</td>
</tr>
<tr>
<td>Marine water</td>
<td>0,036 mg/l</td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td>6,37 mg/kg</td>
</tr>
<tr>
<td>Marine sediment</td>
<td>0,637 mg/kg</td>
</tr>
<tr>
<td>Soil</td>
<td>1,06 mg/kg</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Engineering measures
Effective exhaust ventilation system
effective ventilation in all processing areas

Personal protective equipment
Eye protection
Safety glasses with side-shields conforming to EN166
Do not wear contact lenses.
Ensure that eyewash stations and safety showers are close to the workstation location.
Hand protection
Material: Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.

Skin and body protection: Protective suit

Respiratory protection: Use respirator when performing operations involving potential exposure to vapour of the product. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used. Respirator with a vapour filter (EN 141)

Protective measures: Avoid contact with skin. Wear suitable protective equipment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **Appearance**: liquid
- **Colour**: red
- **Odour**: ammoniacal
- **Odour Threshold**: not determined
- **pH**: not determined
- **Melting point/freezing point**: Not applicable
- **Boiling point/boiling range**: > 180 °C
- **Flash point**: 160 °C
- **Evaporation rate**: not determined
- **Upper explosion limit**: Not applicable
- **Lower explosion limit**: Not applicable
- **Vapour pressure**: Not applicable
- **Relative vapour density**: not determined
- **Density**: 0.97 g/cm³ (25 °C)
- **Bulk density**: not determined
- **Solubility(ies)**
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

EPROPOX HC 2640 B

Solubility in other solvents : not determined
Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : Not applicable
Thermal decomposition : Method: No data available

Viscosity
Viscosity, dynamic : 800 - 1.100 mPa.s (25 °C)
Viscosity, kinematic : not determined
Explosive properties : Not applicable
Oxidizing properties : Not applicable

9.2 Other information
Surface tension : not determined
Sublimation point : Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity
Stable under recommended storage conditions.

10.2 Chemical stability
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions
Hazardous reactions : Reacts with the following substances:
                      Acids
                      Strong oxidizing agents

10.4 Conditions to avoid
Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials
Materials to avoid : Strong acids
                      Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products : This product may release the following:
                                    Nitrogen oxides (NOx)
                                    Carbon monoxide
                                    Carbon dioxide (CO2)
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

**Product:**
- Acute oral toxicity: Acute toxicity estimate: 1.254 mg/kg
  Method: Calculation method

**Components:**
- 2-ethylhexanoic acid:
  - Acute dermal toxicity: LD50 (Rat, male and female): > 2.000 mg/kg
    Method: OECD Test Guideline 402
    GLP: yes

Skin corrosion/irritation

**Product:**
Remarks: Acute dermal irritation/corrosion

**Components:**
- 2-ethylhexanoic acid:
  Species: Rabbit
  Method: OECD Test Guideline 404
  Result: No skin irritation
  GLP: yes

Serious eye damage/eye irritation

**Product:**
Remarks: Severe eye irritation

**Components:**
- 2-ethylhexanoic acid:
  Species: Rabbit
  Method: OECD Test Guideline 405
  Result: No eye irritation
  GLP: yes

Respiratory or skin sensitisation

**Product:**
Remarks: No data available

**Components:**
- 2-ethylhexanoic acid:
  Test Type: Maximisation Test (GPMT)
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

STOT - single exposure

STOT - repeated exposure

Repeated dose toxicity

**Product:**
Remarks: No data available

Aspiration toxicity

Further information

**Product:**
Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

**Product:**
Toxicity to fish : Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

**Components:**
2-ethylhexanoic acid:
Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): 180 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 85.4 mg/l
Exposure time: 48 h
Test Type: static test
Method: Tested according to Annex V of Directive 67/548/EEC.

Toxicity to algae : ErC50 (Scenedesmus subspicatus): 49.3 mg/l
Exposure time: 72 h
Test Type: static test
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: 25 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: static test
Method: OECD Test Guideline 211

12.2 Persistence and degradability

**Product:**
Biodegradability: Remarks: No data available

**Components:**
2-ethylhexanoic acid:
Biodegradability: Test Type: aerobic
Result: Readily biodegradable.
Method: OECD Test Guideline 301

12.3 Bioaccumulative potential

**Product:**
Bioaccumulation: Remarks: No data available

**Components:**
2-ethylhexanoic acid:
Partition coefficient: n-octanol/water: log Pow: 2.7 (25 °C)
pH: 4.7
Method: OECD Test Guideline 107

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment

**Product:**
Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

**Product:**
Additional ecological information: Remarks: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
EPROPOX HC 2640 B

Product: In accordance with local and national regulations. Container hazardous when empty. Do not dispose of with domestic refuse. Do not mix waste streams during collection.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number
Not regulated as a dangerous good

14.2 UN proper shipping name
Not regulated as a dangerous good

14.3 Transport hazard class(es)
Not regulated as a dangerous good

14.4 Packing group
Not regulated as a dangerous good

14.5 Environmental hazards
Not regulated as a dangerous good

14.6 Special precautions for user
Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

SECTION 15: Regulatory information

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

- REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII): Not applicable
- REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
- REACH - List of substances subject to authorisation (Annex XIV): Not applicable

15.2 Chemical Safety Assessment
Not applicable
SECTION 16: Other information

Full text of R-Phrases
R22 : Harmful if swallowed.
R34 : Causes burns.
R36/38 : Irritating to eyes and skin.
R63 : Possible risk of harm to the unborn child.

Full text of H-Statements
H302 : Harmful if swallowed.
H314 : Causes severe skin burns and eye damage.
H315 : Causes skin irritation.
H319 : Causes serious eye irritation.
H361d : Suspected of damaging the unborn child.

Full text of other abbreviations
Acute Tox. : Acute toxicity
Eye Irrit. : Eye irritation
Repr. : Reproductive toxicity
Skin Corr. : Skin corrosion
Skin Irrit. : Skin irritation

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.