SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

EPROPOX FC 15 A | FC 30 A | HC 120 A

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

1.1 Product identifier
Trade name: EPROPOX FC 15 A

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

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)
Skin irritation, Category 2: H315: Causes skin irritation.
Eye irritation, Category 2: H319: Causes serious eye irritation.
Skin sensitisation, Category 1: H317: May cause an allergic skin reaction.
Chronic aquatic toxicity, Category 2: H411: Toxic to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)
Sensitising: R43: May cause sensitisation by skin contact.
Irritant: R36/38: Irritating to eyes and skin.
Dangerous for the environment: R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

Signal word: Warning

Hazard statements:
- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H319: Causes serious eye irritation.
- H411: Toxic to aquatic life with long lasting effects.

Precautionary statements:
- Prevention:
  - P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
  - P273: Avoid release to the environment.
  - P280: Wear protective gloves.
- Response:
  - P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention.
  - P337 + P313: If eye irritation persists: Get medical advice/ attention.

Hazardous components which must be listed on the label:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700)
Epichlorohydrin-formaldehyde-phenol polymer number average molecular weight # 700
1,6-bis(2,3-epoxypropoxy)hexane

2.3 Other hazards
None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures
Chemical nature: Modified epoxy resin

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No. EC-No. 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>reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight &lt;= 700)</td>
<td>25068-38-6 01-2119456619-26</td>
<td>Xi; R36/38 R43 N; R51-R53</td>
<td>Eye Irrit. 2; H319 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Chronic 2; H411</td>
<td>&gt;= 50 - &lt;= 100</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
- Keep warm and in a quiet place.
- Show this safety data sheet to the doctor in attendance.
- 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.
- If skin irritation persists, call 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
- Keep at rest.
- Do not induce vomiting without medical advice.
- Keep respiratory tract clear.
- If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms
- irritant effects
- Redness
- sensitising effects

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:
- Foam
- Sand
- Carbon dioxide (CO2)
- Water mist

Unsuitable extinguishing media:
- Water spray jet

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.

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.
- Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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. 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.

Advice on common storage: Keep away from oxidising agents, strongly acid or alkaline materials and amines.

Keep product and empty container away from heat and sources of ignition.

Keep away from food and drink.

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:

- **Reaction product:** Bisphenol-A-epichlorhydrin and epoxy resin (number average molecular weight <= 700)
  - **End Use:** Workers
  - **Exposure routes:** Skin contact
  - **Potential health effects:** Acute systemic effects, Long-term systemic effects
  - **Value:** 3.571 mg/kg
  - **End Use:** Consumers
  - **Exposure routes:** Skin contact
  - **Potential health effects:** Acute systemic effects, Long-term systemic effects
  - **Value:** 12.25 mg/m³

1,6-bis(2,3-epoxypropoxy)hexane

- **End Use:** Workers
- **Exposure routes:** Skin contact
- **Potential health effects:** Long-term systemic effects
- **Value:** 2.8 mg/kg
- **End Use:** Consumers
- **Exposure routes:** Inhalation
- **Potential health effects:** Long-term systemic effects
- **Value:** 4.9 mg/m³

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

- **Reaction product:** Bisphenol-A-epichlorhydrin and epoxy resin (number average molecular weight <= 700)
  - **Fresh water**
  - **Value:** 0.006 mg/l
  - **Marine water**
  - **Value:** 0.0006 mg/l
  - **Intermittent releases**
  - **Value:** 0.018 mg/l
  - **Sewage treatment plant**
  - **Value:** 10 mg/l
  - **Fresh water sediment**
  - **Value:** 0.996 mg/kg
  - **Marine sediment**
  - **Value:** 0.0996 mg/kg
  - **Soil**
  - **Value:** 0.196 mg/kg

- **1,6-bis(2,3-epoxypropoxy)hexane**
  - **Sewage treatment plant**
  - **Value:** 1 mg/l
  - **Fresh water**
  - **Value:** 0.0115 mg/l
  - **Fresh water sediment**
  - **Value:** 0.283 mg/kg
  - **Marine water**
  - **Value:** 0.00115 mg/l
  - **Marine sediment**
8.2 Exposure controls

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

Personal protective equipment
Eye protection : Do not wear contact lenses.
   Safety glasses with side-shields conforming to EN166
   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 respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
   In the case of vapour formation use a respirator with an approved filter.
   Respirator with a vapour filter (EN 141)
   Apply technical measures to comply with the occupational exposure limits.
   This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.

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 : light yellow
Odour : slight
Odour Threshold : not determined
pH : not determined
Melting point/freezing point : Not applicable
Boiling point/boiling range : > 200 °C
Flash point : 150 °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 : 1.15 g/cm³ (25 °C)

Bulk density : not determined

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 : 2.400 - 3.600 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:
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Bases
Strong oxidizing agents
Avoid amines.

10.4 Conditions to avoid

Conditions to avoid: No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid: Incompatible with oxidizing agents.

10.6 Hazardous decomposition products

Hazardous decomposition products: This product may release the following:
Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Components:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):

Acute oral toxicity: LD50 (Rat, female): > 2.000 mg/kg
Method: OECD Test Guideline 420
GLP: yes

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

Skin corrosion/irritation

Product:
Remarks: No data available

Components:
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Skin irritation
GLP: yes

Serious eye damage/eye irritation

Product:
Remarks: No data available
Respiratory or skin sensitisation

**Components:**
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):
Test Type: Mouse Local Lymph Node assay (LLNA)
Species: Mouse
Method: OECD Test Guideline 429
Result: May cause sensitisation by skin contact.
GLP: yes

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

STOT - single exposure

**Product:**
Remarks: Not applicable

STOT - repeated exposure

Aspiration toxicity

**Components:**
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):
No aspiration toxicity classification

---

**SECTION 12: Ecological information**

12.1 Toxicity

**Components:**
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia (water flea)): 1,7 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOEC: 0,3 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes
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12.2 Persistence and degradability

**Components:**
reaction product: bisphenol-A-(epichlorhydrin) and epoxy resin (number average molecular weight <= 700):

Biodegradability : Result: Not readily biodegradable,
Method: OECD Test Guideline 301F
GLP: yes

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
Not relevant

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

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

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>: UN 3082</td>
<td>: UN 3082</td>
<td>: UN 3082</td>
</tr>
</tbody>
</table>

14.2 UN proper shipping name

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>IMDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)</td>
<td>: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)</td>
</tr>
</tbody>
</table>
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IATA : Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)

14.3 Transport hazard class(es)
ADR/RID : 9
IMDG : 9
IATA : 9

14.4 Packing group
ADR/RID
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : E

IMDG
Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA
Packing instruction (cargo aircraft) : 964
Packing instruction (passen- ger aircraft) : 964
Packing group : III
Labels : 9

14.5 Environmental hazards
ADR/RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

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 sub- stances of very high concern (Regu- lation (EC) No 1907/2006 (REACH), Article 57).
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REACH - List of substances subject to authorisation : Not applicable
(Annex XIV)


<table>
<thead>
<tr>
<th>9b</th>
<th>Dangerous for the environment</th>
<th>Quantity 1</th>
<th>Quantity 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>200 t</td>
<td>500 t</td>
</tr>
</tbody>
</table>

15.2 Chemical Safety Assessment
Not applicable

SECTION 16: Other information

Full text of R-Phrases
R36/38 : Irritating to eyes and skin.
R43   : May cause sensitisation by skin contact.
R51   : Toxic to aquatic organisms.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53   : May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements
H315  : Causes skin irritation.
H317  : May cause an allergic skin reaction.
H319  : Causes serious eye irritation.
H411  : Toxic to aquatic life with long lasting effects.
H412  : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations
Aquatic Chronic : Chronic aquatic toxicity
Eye Irrit.       : Eye irritation
Skin Irrit.      : Skin irritation
Skin Sens.       : Skin sensitisation

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.