1. IDENTIFICATION

**Product identifier**

**Product name:** EPOFIX RESIN
Cat. No. 40200030, 40200029

**Container size:** 1 l

**Recommended use and restrictions on use**

**Application:** For embedding and impregnation of materialographic specimens

**Details of the supplier of the safety data sheet**

**Supplier:** Struers Ltd
7275 West Credit Avenue
Ontario L5N 5M9 Mississauga
Canada
Tel:+1 (905) 8148855

**Responsible for safety data sheet authoring:** Responsible for safety data sheet authoring: DHI
Any questions to the contents of this safety data sheet should be sent to: struers@struers.dk

**Emergency telephone number**

Alberta & NWT:
Poison & Drug Information Service (PADIS): 1-800-332-1414

British Columbia:
Drug and Poison Information Centre (DPIC): 604-682-5050 / 1-800-567-8911

Ontario:
Poison Centre: 1-800-268-9017

Québec:
Poison Control Centre: 1-800-463-5060

Infotrac:
1-800-535-5053

Struers CAN:
+1 (905) 8148855
(Only during office hours)
2. HAZARDS IDENTIFICATION

Classification of the hazardous product

WHMIS 2015:
- Skin Irritation — Category 2
- Eye Irritation — Category 2
- Skin Sensitizer — Category 1
- Aquatic Chronic Toxicity — Category 2

Label elements

Warning

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.

P273 Avoid release to the environment.
P280 Wear protective clothing, gloves, eye and face protection.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P101 If medical advice is needed, have product container or label at hand.
P103 Read label before use.
P261 Avoid breathing gas, fume, vapours or spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local regulations.

Other hazards

PBT/vPvB: Not Classified as PBT/vPvB by current EU criteria.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

The product contains: epoxy resin. (*)
4. FIRST-AID MEASURES

**Description of first-aid measures**

**Inhalation:** Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and take along these instructions.

**Skin contact:** Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring along these instructions.

**Ingestion:** Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions. Do not induce vomiting.

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

**Symptoms/effects:** See section 11 for more detailed information on health effects and symptoms.

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

**Medical attention/treatments:** Treat symptomatically.

5. FIRE-FIGHTING MEASURES

**Extinguishing media**

**Extinguishing media:** Extinguish with foam, carbon dioxide, dry powder or water fog.

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the hazardous product**

**Specific hazards:** By heating and fire, irritating vapors/gases may be formed.

**Advice for fire-fighters**

**Protective equipment for fire-fighters:** Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.
6. ACCIDENTAL RELEASE MEASURES

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

**Protective equipment:** Avoid inhalation of vapors and aerosols and contact with skin and eyes. For personal protection, see section 8. (*)

**Emergency procedures:** No specific recommendations. For personal protection, see section 8. (*)

**Environmental precautions:** Avoid discharge into drains, water courses or onto the ground.

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

**Spill Cleanup Methods:** Absorb spillage with suitable absorbent material.

**Reference to other items**

**References:** For personal protection, see section 8. For waste disposal, see section 13.

7. HANDLING AND STORAGE

**Precautions for safe handling**

**Safe handling advice:** Observe good chemical hygiene practices. Avoid inhalation of vapors and aerosols and contact with skin and eyes.

Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site.

**Technical measures:** Work practice should minimize contact. Technical aids: Use disposable equipment (rags, brushes, spatulas, putty knives, etc.), if possible.

**Technical precautions:** First-aid equipment, including eye wash bottle, must be available at the work site.

**Conditions for safe storage, including any incompatibilities**

**Technical measures for safe storage:** No special precautions.

**Storage conditions:** Store in closed original container in a dry place. Avoid contact with oxidizing agents.

**Specific end-use(s)**

**Specific use(s):** No information available.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No occupational exposure limit assigned.

Exposure controls

Engineering measures: Mix and prepare in a place with efficient exhaust ventilation. An eye wash bottle must be available at the work site.

Personal protection: Personal protection equipment should be chosen according to relevant standards and in discussion with the supplier of the personal protective equipment.

Respiratory equipment: In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment. It is recommended to use respiratory equipment with combination filter, type ABEK

Hand protection: Use disposable gloves protecting against epoxy along with cotton gloves closest to the skin. Laminate (PE/EVOH) gloves are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye protection: Wear goggles/face shield.

Skin protection: Risk of contact: Wear apron or protective clothing in case of splashes.

Hygiene measures: Remove contaminated clothing and wash the skin thoroughly with soap and water after work. When using do not eat, drink or smoke.

Environmental Exposure Controls: Not available.
### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

(*)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form:</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Colour:</strong></td>
<td>Colourless to pale yellow.</td>
</tr>
<tr>
<td><strong>Odour:</strong></td>
<td>Mild</td>
</tr>
<tr>
<td><strong>Odour threshold:</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>pH:</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Melting point:</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Boiling point:</strong></td>
<td>&gt;148°C</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>176.7 - 190.6°C</td>
</tr>
<tr>
<td><strong>Evaporation rate:</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas):</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapour pressure:</strong></td>
<td>0.06 mmHg (21°C)</td>
</tr>
<tr>
<td><strong>Vapour density:</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Relative density:</strong></td>
<td>1.11 - 1.14</td>
</tr>
<tr>
<td><strong>Solubility:</strong></td>
<td>Insoluble in water.</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature (°C):</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Decomposition temperature (°C):</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td>600 - 800 cP (25°C)</td>
</tr>
<tr>
<td><strong>Explosive properties:</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Oxidising properties:</strong></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Other information**

**Other data:** Volatile Organic Compound (VOC): 0 g/l
10. STABILITY AND REACTIVITY

Reactivity
Reactivity: No data available.

Chemical stability
Stability: Stable under normal temperature conditions.
Curing time: 12 hours

Possibility of hazardous reactions
Hazardous Reactions: Reacts with alkalis and amines generating excessive heat.

Conditions to avoid
Conditions/materials to avoid: Heating, moisture, water and amines. Strong oxidizing substances, strong acids and strong bases.

Incompatible materials
Incompatible materials: Strong oxidizing substances, strong acids and strong bases.

Hazardous decomposition products
Hazardous decomposition products: By heating and fire, irritating vapors/gases may be formed.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute Toxicity (Oral): Based on available data, the classification criteria are not met.
Acute Toxicity (Dermal): Based on available data, the classification criteria are not met.
Acute Toxicity (Inhalation): Based on available data, the classification criteria are not met.
Skin Corrosion/Irritation: Causes skin irritation.
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitization: May cause an allergic skin reaction.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive Toxicity: Based on available data, the classification criteria are not met.
STOT - Single exposure: Based on available data, the classification criteria are not met.
STOT - Repeated exposure: Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

Inhalation: Not relevant at normal room temperatures. When heated, irritating vapors may be formed.
Ingestion: Irritating. May cause nausea, stomach pain and vomiting.
12. ECOLOGICAL INFORMATION

Ecotoxicity
Ecotoxicity: Toxic to aquatic life with long lasting effects.

Persistence and degradability
Degradability: This product is expected to be heavily biodegradable.

Bioaccumulative potential
Bioaccumulative potential: The product contains potentially bio-accumulating substances.
log Pow: 3-5

Mobility in soil
Mobility: Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. (Koc: >5000)
Reaction product: bisphenol-A-(epichlorhydrin), epoxy resin (number average molecular weight <= 700) (Koc: 500-2000)

Results of PBT and vPvB assessment
PBT/vPvB: This product does not contain any PBT or vPvB substances.

Other adverse effects
Other adverse effects: No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Waste from residues: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
Note that fully cured material is not considered as hazardous waste.

Contaminated packaging: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
14. TRANSPORT INFORMATION

The product is covered by international regulation on the transport of dangerous goods (IMDG, IATA).

**UN number**

UN-No: 3082

**UN proper shipping name**

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin)

Additional IMDG information:
EmS: F-A, S-F
MFAG: 1

**Transport hazard class(es)**

Class: 9

**Packing group**

PG: III

**Environmental hazards**

Marine pollutant: Yes.
Environmentally Hazardous substance: Yes.

**Special precautions for user**

Special precautions: None known.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Transport in bulk: Not relevant
15. REGULATORY INFORMATION

**Safety, health and environmental regulations specific to the product**

**Special provisions:**
This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.
TSCA: All chemicals included in the product are TSCA listed.
DSL: All chemicals included in the product are DSL listed or exempt.

**National regulation:**
Hazardous Products Regulations, with amendments.
Canadian Environmental Protection Act, Reporting for the Domestic Substances List (DSL), with amendments.
Department of Justice. Canadian Environmental Protection Act 1999 (CEPA), 1999, c. 33, with amendments.
Ontario: Control of Exposure to Biological or Chemical Agents R.R.O. 1990, Reg. 833, with amendments (2016).
Quebec: Regulation respecting the quality of the work environment, with amendments (2013-12-13).

16. OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions. The following sections contain revisions or new statements: 3, 6, 9.
The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

Additional information: Classification according to WHMIS 2015:
Calculation method.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Agern Allé 5, DK-2970 Hørsholm, Denmark.