

# MATERIAL SAFETY DATA SHEET



according to EEC Directives 91/155/EEC and 93/112/EC

Product name: EPOFIX HARDENER Page: 1/6  
Last revised date: 2000-01-27 Print date: 2000-01-28  
P/N-no.: M1201026 SDS-ID: US-D/1.0

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Product name: EPOFIX HARDENER  
Application: For embedding and impregnation of materialographic specimens Container size: 130 ml, 500 ml  
Supplier: Struers A/S  
Valhøjs Allé 176  
DK-2610 Rødovre  
Tel +45 36 70 35 00

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains: hardener.

<u>Chemical name:</u>	<u>CAS-No.:</u>	<u>%:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
Triethylenetetramine	112-24-3	95-100	Xn;R21 C;R34 R43 N;R52/53	-
Water	7732-18-5	0-5	-	-

## 3. HAZARDS IDENTIFICATION

Man: Corrosive. Prolonged contact causes serious eye and tissue damage. Be aware that symptoms of lung oedema (shortness of breath) may develop several hours after exposure. The product contains a sensitizing substance which may provoke an allergic reaction among sensitive individuals.

Environment: The product contains a substance which is harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

## 4. FIRST-AID MEASURES

Inhalation: Move into fresh air and keep at rest. Be aware that symptoms of lung oedema (shortness of breath) may develop several hours after exposure. Call physician immediately.

Skin contact: Remove contaminated clothes and rinse skin thoroughly with water. In case of eczema or other skin disorders: Seek medical attention and bring along these instructions.

Eye contact: Immediately flush with plenty of water. Remove any contact lenses and open eyelids widely. Call an ambulance. Continue flushing during transport to hospital. Bring along these instructions.

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

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## 5. FIRE-FIGHTING MEASURES

Extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Specific hazards: By heating and fire, very toxic nitrous vapours may be formed.

Protective equipment for fire-fighters: Use air-supplied respirator, gloves and protective goggles.

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## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid contact with skin and eyes. For personal protection, see point 8.

Environmental precautions: Do not discharge into drains, water courses or onto the ground.

Methods for cleaning up: Absorb spillage with non-combustible, absorbing material. For waste disposal, see point 13.

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## 7. HANDLING AND STORAGE

Safe handling advice: Avoid contact with skin and eyes. Immediately change drenched clothing. Observe good industrial hygiene practices.

Technical measures: Work practice should minimise contact.

Technical precautions: Local exhaust is recommended. Provide easy access to water supply and eye wash facilities.

Technical measures for safe storage: No special precautions.

Storage conditions: Store in a cool and well-ventilated place.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures: Provide adequate ventilation. Local exhaust is recommended. An eye wash bottle must be available at the work site.

Respiratory equipment: In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment. Use respiratory equipment with gas filter, type K.

Hand protection: Wear protective gloves. Neoprene gloves are recommended.

Eye protection: Wear goggles/face shield.

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

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: yellow liquid  
Odour: characteristic  
pH: not relevant  
Boiling point: 260-290°C  
Flash point: 114°C  
Explosive properties: 1-3.6 vol%  
Relative density: 0.98  
Solubility: soluble in water

## 10. STABILITY AND REACTIVITY

Stability: Stable under normal temperature conditions.

Conditions/  
materials to avoid: Heating. Direct sunlight.

Hazardous  
decomposition products: By heating and fire, very toxic nitrous vapours are formed.

## 11. TOXICOLOGICAL INFORMATION

Inhalation: Not relevant at normal room temperatures. When heated, toxic vapours may be formed.

Skin contact: Corrosive. Prolonged contact causes serious tissue damage. Risk of sensitization or allergic reactions among sensitive individuals. Contains components which may penetrate the skin.

Eye contact: Corrosive. Immediate first aid is necessary.

Ingestion: Corrosive. Even small amounts may cause serious damage.

Specific effects: May cause sensitization.  
Carcinogenicity:  
National Toxicology Program (NTP): No.  
I.A.R.C. Monographs: No.  
OSHA: No.

## 12. ECOLOGICAL INFORMATION

Mobility: The product is water soluble and may spread in water systems.

Degradability: The product is not biodegradable.

Ecotoxicity: The product contains a substance which is harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

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## 13. DISPOSAL CONSIDERATIONS

Dispose of waste and residues according to agreement with local authorities. Waste should be considered as dangerous waste.

Waste from residues: EWC-code: 20 01 12

Contaminated packaging: Dispose of contaminated packings as residue.

## 14. TRANSPORT INFORMATION

UN-number: 2259 Proper shipping name: TRIETHYLENETETRAMINE

Sea (IMDG): **Class:** 8 **PG:** II **MP:** No  
**EmS:** 8-05 **MFAG:** 320

PG: To be handled locally.

Land (RID/ADR): **Class:** 8 **Item:** 53 **Letter:** b

Air (ICAO): **Class:** 8 **PG:** II

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## 15. REGULATORY INFORMATION

### Labelling:

Contains: Triethylenetetramine



Corrosive

- R21 Harmful in contact with skin.  
R34 Causes burns.  
R43 May cause sensitisation by skin contact.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

NFPA Rating:



Specific provisions: TSCA: Listed.

National regulation: Europe/USA:  
This Safety Data Sheet has been prepared according to the EU-regulation.

EC Directives 67/548/EEC on dangerous substances and 88/379/EEC on dangerous preparations (up to and inclusive of the 25th adaptation).

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## 16. OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

Transport information (ICAO):

Pass: 808/1 I

Cargo: 812/30 I

Released: 21 March 1995

Approved by DTC.

*Christina Meyer*

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.

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