

# MATERIAL SAFETY DATA SHEET



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

Product name:	TRIOFIX-2 LIQUID I	Page:	1/7
Last revised date:	2000-01-27	Print date:	2000-01-28
P/N-no.:	M1201029	SDS-ID:	US-D/1.0

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

<u>Product name:</u>	TRIOFIX-2 LIQUID I		
<u>Application:</u>	For embedding of specimens	<u>Container size:</u>	1 l
<u>Supplier:</u>	Struers A/S Valhøjs Allé 176 DK-2610 Rødovre Tel: + 45 3670 3500		

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains: organic solvents and binders.

<u>Chemical name:</u>	<u>CAS-No.:</u>	<u>%:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
Methyl methacrylate	80-62-6	1-10	F;R11 Xi;R36/37/38 R43	-
Styrene	100-42-5	25-50	R10 Xn;R20 Xi;R36/38	-
Binder	-	50-100	-	-

## 3. HAZARDS IDENTIFICATION

The product is flammable.

Man: Harmful by inhalation. May cause allergic skin disorders in sensitive individuals. Vapours from organic solvents may be absorbed through the lungs and cause permanent damage to the nervous system, including the brain. The product contains components which may penetrate skin. Styrene is suspected to be carcinogenic.

Environment: The product contains a substance which is harmful to aquatic organisms.

## 4. FIRST-AID MEASURES

Inhalation: Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring 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 bring 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 uncomfortable: Seek hospital and bring along these instructions. Do not induce vomiting.

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## 5. FIRE-FIGHTING MEASURES

Extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

Specific hazards: The product is flammable, and heating may generate vapours which may form explosive vapour/air mixtures. By heating and fire, toxic vapours may be formed.

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid inhalation of vapours and contact with skin and eyes. Avoid smoking and use of open fire. For personal protection, see point 8.

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

Methods for cleaning up: Remove sources of ignition. Dam and absorb spillages with sand, earth or other non-combustible material. For waste disposal, see point 13.

## 7. HANDLING AND STORAGE

Safe handling advice: Avoid inhalation of vapours and contact with skin and eyes. Avoid smoking and use of open fire. Avoid eating, drinking and smoking when using the product. Observe good industrial hygiene practices.

Technical measures: Work practice should minimise contact.

Technical precautions: Local exhaust is recommended.

Technical measures for safe storage: No special precautions.

Storage conditions: Store in tightly closed original container in a well-ventilated place.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapours. Provide easy access to water supply and eye wash facilities.

<u>Chemical name:</u>	<u>Exposure limits:</u>	<u>Type:</u>	<u>Notes:</u>	<u>References:</u>
Methyl methacrylate	100ppm	TWA	A4	ACGIH (1999)
Styrene	20ppm	TWA	A4	ACGIH (1999)
	40ppm	STEL	-	ACGIH (1999)
	0,55 mg/L	blood	End of shift	
Methyl methacrylate	100ppm	410mg/m <sup>3</sup>	TWA	-
Styrene	100ppm	TWA	-	OSHA 1998
	200ppm	STEL/C	-	OSHA 1998

Respiratory equipment: In case of inadequate ventilation: Use respiratory equipment with gas filter, type A2.

Hand protection: Wear protective gloves. Lamine (PE/EVOH) gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Eye protection: Wear goggles/face shield.

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	yellow liquid
Odour:	characteristic
pH:	not relevant
Boiling point:	not available
Flash point:	34°C
Explosive properties:	1.1 - 12.5%
Relative density:	1
Solubility:	Miscible with water.

## 10. STABILITY AND REACTIVITY

Stability: Stable under normal temperature conditions.

Conditions/  
materials to avoid: Direct sunlight. Heating. Oxidizing agents.

Hazardous  
decomposition products: None in particular.

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## 11. TOXICOLOGICAL INFORMATION

Inhalation: Harmful by inhalation. Vapours may cause headache, fatigue, dizziness and nausea. Frequent inhalation of even small concentrations may cause irritability, fatigue, memory failure and in time permanent damage to the nervous system, including the brain, and possibly liver and kidneys, too.

Skin contact: Irritating. Risk of sensitization or allergic reactions among sensitive individuals. Contains components which may penetrate the skin.

Eye contact: Irritating to eyes.

Ingestion: Irritating. May be absorbed in the body and cause dizziness, nausea and vomiting.

Specific effects: Frequent inhalation of even small concentrations may cause irritability, fatigue, memory failure and in time permanent damage to the nervous system, including the brain, and possibly liver and kidneys, too. Styrene is suspected to be carcinogenic.

Carcinogenicity:

National Toxicology Program (NTP): No.

I.A.R.C. Monographs: Yes

OSHA: No.

## 12. ECOLOGICAL INFORMATION

Mobility: The product is miscible with water. May spread in water systems. The product contains organic solvents which will evaporate easily from all surfaces.

Degradability: The product is not biodegradable.

Ecotoxicity: The product contains a substance which causes risk of hazardous effects to the environment.

## 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: 08 04 02

Contaminated packaging: Dispose of contaminated packings as residue.

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## 14. TRANSPORT INFORMATION

UN-number: 1866      Proper shipping name: RESIN SOLUTION, FLAMMABLE (Styrene, Methyl methacrylate)

Sea (IMDG):      **Class:** 3.3      **PG:** III      **MP:** Yes

**EmS:** 3-05      **MFAG:** 310

PG: To be handled locally.

Land (RID/ADR):      **Class:** 3      **Item:** 31      **Letter:** c

Air (ICAO):      **Class:** 3      **PG:** III

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## 15. REGULATORY INFORMATION

### Labelling:

Contains: Styrene  
Methyl methacrylate



Harmful

R10 Flammable.  
R20 Harmful by inhalation.  
R36/38 Irritating to eyes and skin.  
R43 May cause sensitisation by skin contact.  
S9 Keep container in a well-ventilated place.  
S23 Do not breathe vapour.  
S24 Avoid contact with skin.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S37/39 Wear suitable gloves and eye/face protection.

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).

Threshold Limit Values (1999), ACGIH, by the American Conference on Governmental Industrial Hygienists.

The Code of Federal Regulation, Title 29, part 1910. Occupational Safety and Health Standards, Air contaminants, 1998.

International Agency for Research on Cancer (IARC): IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Volumes 1-73. Lyon: IARC, World Health Organization, 1972-1998.

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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: 309/60 I

Cargo: 310/220 I

Released: 16 March 1995

Approved by DTC.

*Frank G. Berglund*

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 DANISH TOXICOLOGY CENTRE, Kogle Allé 2, DK-2970 Hørsholm, Denmark. Telephone +45 45 76 20 55 Telefax +45 45 76 24 55