

MATERIAL SAFETY DATA SHEET



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

Product name: TRIOFIX-2 LIQUID II Page: 1/7
Last revised date: 2000-01-27 Print date: 2000-01-28
P/N-no.: M1201030 SDS-ID: US-D/1.0

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

Product name: TRIOFIX-2 LIQUID II
Application: For embedding of specimens Container size: 0.5 l
Supplier: Struers A/S
Valhøjs Allé 176
DK-2610 Rødovre
Tel: 45 3670 3500

2. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains: organic solvents, plasticizer, resin.

<u>Chemical name:</u>	<u>CAS-No.:</u>	<u>%:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
Methyl methacrylate	80-62-6	20-60	F;R11 Xi;R36/37/38 R43	-
Styrene	100-42-5	1-10	R10 Xn;R20 Xi;R36/38	-
N,N-Diethyl-p-toluidine	613-48-9	<1	T;R23/24/25 R33 R52/53	-
1,1'-(p-Tolylimino)-dipropan-2-ol	38668-48-3	0.5-2.5	T;R25	-
Epoxy Resin	-	20-50	-	-
Plasticizer	-	20-50	-	-

3. HAZARDS IDENTIFICATION

The product is highly flammable.

Man: Irritating to eyes, respiratory system and skin. May cause allergic skin disorders in sensitive individuals. 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.

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 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.

MATERIAL SAFETY DATA SHEET

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



Product name: TRIOFIX-2 LIQUID II

Page: 2/7

Last revised date: 2000-01-27

Print date: 2000-01-28

P/N-no.: M1201030

SDS-ID: US-D/1.0

5. FIRE-FIGHTING MEASURES

Extinguishing media: Extinguish with 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 highly flammable, and explosive vapours/air mixtures may be formed even at normal room temperatures. By heating and fire, toxic vapours may be formed.

Protective equipment for fire-fighters: Use air-supplied respirator during fire fighting.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Do not smoke or use open fire or other sources of ignition. Avoid inhalation of vapours and contact with skin and eyes. In case of inadequate ventilation: Use respiratory equipment with gas filter, type A2. For personal protection, see point 8.

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

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

7. HANDLING AND STORAGE

Safe handling advice: Avoid inhalation of vapours and contact with skin and eyes. 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: Follow rules for flammable liquids.

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

MATERIAL SAFETY DATA SHEET

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



Product name: TRIOFIX-2 LIQUID II

Page: 3/7

Last revised date: 2000-01-27

Print date: 2000-01-28

P/N-no.: M1201030

SDS-ID: US-D/1.0

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>
Styrene	20ppm	TWA	A4	ACGIH (1999)
	40ppm	STEL	-	ACGIH (1999)
	0,55 mg/L	blood	End of shift	
Styrene	100ppm	TWA	-	OSHA 1998
	200ppm	STEL/C	-	
Methyl methacrylate	100ppm	TWA	A4	ACGIH (1999)
Methyl methacrylate	100ppm 410mg/m ³	TWA	-	OSHA 1998

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

Hand protection: Wear protective gloves. Laminate (PE/EVOH) gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Consult the glove supplier to find the most suitable gloves.

Eye protection: Wear goggles/face shield.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	green liquid
Odour:	characteristic
pH:	not available
Boiling point:	not available
Flash point:	10°C
Explosive properties:	1.1-12.5 vol % in air
Relative density:	1
Solubility:	Miscible with water.

10. STABILITY AND REACTIVITY

Stability: Stable under normal temperature conditions.

Conditions/ materials to avoid: Avoid exposure to high temperatures or direct sunlight. Avoid contact with oxidizing agents.

Hazardous decomposition products: By heating, toxic vapours are formed.

MATERIAL SAFETY DATA SHEET

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



Product name:	TRIOFIX-2 LIQUID II	Page:	4/7
Last revised date:	2000-01-27	Print date:	2000-01-28
P/N-no.:	M1201030	SDS-ID:	US-D/1.0

11. TOXICOLOGICAL INFORMATION

- Inhalation: Vapours have a narcotic effect and may cause headache, fatigue, dizziness and nausea. In serious cases, unconsciousness and permanent damage to the nervous system, including the brain, and kidneys may be seen.
- Skin contact: Irritating. Risk of sensitization or allergic reactions among sensitive individuals. Contains organic solvents which may penetrate the skin.
- Eye contact: Irritating and may cause redness and pain.
- 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.
Carcinogenicity:
National Toxicology Program (NTP): No.
I.A.R.C. Monographs: Yes, Styrene is suspected to be carcinogenic.
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 substances which are harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment.
-

13. DISPOSAL CONSIDERATIONS

Dispose of collected dust 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.

MATERIAL SAFETY DATA SHEET

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



Product name: TRIOFIX-2 LIQUID II

Page: 5/7

Last revised date: 2000-01-27

Print date: 2000-01-28

P/N-no.: M1201030

SDS-ID: US-D/1.0

14. TRANSPORT INFORMATION

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

Sea (IMDG): **Class:** 3.2 **PG:** II **MP:** Yes

EmS: 3-05 **MFAG:** 310

PG: To be handled locally.

Land (RID/ADR): **Class:** 3 **Item:** 5 **Letter:** b

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

MATERIAL SAFETY DATA SHEET

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



Product name: TRIOFIX-2 LIQUID II

Page: 6/7

Last revised date: 2000-01-27

Print date: 2000-01-28

P/N-no.: M1201030

SDS-ID: US-D/1.0

15. REGULATORY INFORMATION

Labelling:

Contains: Methyl methacrylate
Styrene



Irritant



Highly flammable

- R11 Highly flammable.
R36/37/38 Irritating to eyes, respiratory system and skin.
R43 May cause sensitisation by skin contact.
S16 Keep away from sources of ignition - No smoking.
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.

MATERIAL SAFETY DATA SHEET

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



Product name: TRIOFIX-2 LIQUID II

Page: 7/7

Last revised date: 2000-01-27

Print date: 2000-01-28

P/N-no.: M1201030

SDS-ID: US-D/1.0

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: 305/5 I

Cargo: 307/60 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

Customer No: 20169

Filing No: 41452-10920