

TEMAFLOOR 310 ESD HARDENER

Date 25.9.2009

Previous date: 18.1.1999

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**1.1 Identification of the article****1.1.1 Commercial Product Name**

TEMAFLOOR 310 ESD HARDENER

1.1.2 Product code

008 4540

1.2 Use of the Substance/Preparation**1.2.1 Intended use**

Painting work.

Description: Epoxy hardener

1.3 Identification of the company**1.3.1 Supplier**

Tikkurila Oyj

1.3.2 Contact information:**P.O.Box**

P.O.Box 53

Postcode and post office

FI-01301 VANTAA

FINLAND

Telephone

+358 9 857 71

Telefax

+358 9 8577 6936

1.3.4 Responsible for the Safety Data Sheet:

Tikkurila Oy, Product Safety, e-mail: productsafety@tikkurila.com

1.4 Emergency telephone number**1.4.1 Telephone number, name and address**

Tikkurila Oy, Environment and Safety: +358 9 857 71

2. HAZARDS IDENTIFICATION

Flammable.

Corrosive, C

Harmful by inhalation, in contact with skin and if swallowed. Causes burns. May cause sensitization by skin contact. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Information on hazard labelling in section 15.1.

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Hazardous components****3.1.1****CAS number****EINECS****3.1.2****Chemical name of the substance****3.1.3****Concentration****3.1.4****Classification**

2855-13-2

220-666-8

Isophorone diamine

10 - 25 %

C; R21/22-34-43-52/53

25620-58-0

247-134-8

Trimethyl hexamethylene diamine

10 - 25 %

C; R22-34-43-52/53

1330-20-7

215-535-7

Xylene

10 - 25 %

Xn; R10-20/21-38

100-41-4

202-849-4

Ethylbenzene

1 - 5 %

F, Xn; R11-20

71-36-3

200-751-6

N-butanol

5 - 10 %

Xn; R10-22- 37/38-41-67

100-51-6

202-859-9

Benzyl alcohol

10 - 25 %

Xn; R20/22

4. FIRST AID MEASURES**4.1 Additional advice**

In all cases of doubt, or when symptoms persist, seek medical attention.

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- 4.2 Inhalation**
Remove to fresh air, keep patient warm and at rest.
- 4.3 Skin contact**
Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleanser.
- 4.4 Eye contact**
Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart and seek medical advice.
- 4.5 Ingestion**
If accidentally swallowed obtain immediate medical attention. Keep at rest. DO NOT induce vomiting.

5. FIRE-FIGHTING MEASURES

- 5.1 Suitable extinguishing media**
Use foam, CO₂, powder or water spray.
- 5.2 Extinguishing media which must not be used for safety reasons**
Waterjet
- 5.3 Specific hazards**
Fire will produce dense black smoke, which contains decomposition products. Avoid breathing the smoke.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions**
Avoid breathing vapours. Exclude sources of ignition.
Avoid skin contact with the product.
- 6.2 Environmental precautions**
Do not allow to enter drains or water courses.
- 6.3 Methods for cleaning up**
Contain and collect spillage with non-combustible absorbent materials, e.g. sand or vermiculite and place in a container for disposal according to local regulations. Clean preferably with a detergent; avoid the use of solvents.

7. HANDLING AND STORAGE

- 7.1 Handling**
Avoid contact with skin and eyes. Vapours are heavier than air and may form explosive mixtures with air. Good ventilation must be provided. Keep away from sources of ignition. Take precautionary measures against static discharges.
- 7.2 Storage**
Keep containers tightly closed. Store in a cool, dry, well ventilated place away from sources of heat and direct sunlight.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- 8.1 Exposure Limit Values**
- 8.1.1 Occupational exposure limit values**
- | | |
|--------------|---------------|
| Xylene | 100 ppm (8 h) |
| Ethylbenzene | 100 ppm (8 h) |
| N-butanol | 20 ppm (8 h) |
- 8.1.2 Information on limit values**
TLV-TWA = Threshold Limit Values - Time-weighted average / ACGIH 2009
- 8.2 Exposure controls**
- 8.2.1 Occupational exposure controls**
Provide adequate ventilation. Comply with the health and safety at work laws.

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8.2.1.1 Respiratory protection

Use appropriate certified respirators, with gas and vapour filter A, during sanding with dust filter P2, if ventilation is insufficient. During continuous and long-term work the use of air-fed or motor-driven respirators is recommended.

8.2.1.2 Hand protection

Always wear approved protective gloves (e.g. nitrile rubber) against chemicals. Barrier creams may also help to protect the exposed areas of the skin.

8.2.1.3 Eye protection

Safety eyewear must be used.

8.2.1.4 Skin and body protection

Use suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 General Information (appearance, odour)**

Coloured, viscous liquid, strong odour.

9.2 Important Health Safety and Environmental Information

9.2.2 Boiling point/range 137 - 145 °C *)

9.2.3 Flash point 25 °C *)

9.2.5 Explosive properties

9.2.5.1 Lower explosion limit 1 vol-% *)

9.2.5.2 Upper explosion limit 7 vol-% *)

9.2.7 Vapour pressure 0,7 kPa (20 °C) *)

9.2.8 Relative density 0,99

9.2.9 Solubility

9.2.9.1 Water solubility Insoluble

9.3 Other data

Evaporation rate (BuAc=1) :0,76 *)

*) = Xylene

10. STABILITY AND REACTIVITY**10.1 Conditions to avoid**

Solvent vapours may form explosive mixtures with air.

10.2 Materials to avoid

Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.3 Hazardous decomposition products

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

11. TOXICOLOGICAL INFORMATION**11.1 Acute toxicity**

See section 11.5

11.2 Primary irritation

Strongly irritating to the skin and eyes. May cause burns. See section 11.5

11.3 Sensitisation

Exposure by inhalation and skin contact may cause sensitization.

11.5 Human experience

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- 11.5.1 Inhalation: Solvent vapours harmful if inhaled. Long term exposure to component solvent vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache and dizziness.
- 11.5.2 Skin contact: Splashes cause severe irritation. Repeated contact with the preparation causes removal of the natural fat from the skin resulting in contact dermatitis.
- 11.5.3 Other effects: Harmful if taken internally.

12. ECOLOGICAL INFORMATION**12.1 Ecotoxicity****12.1.1 Aquatic toxicity**

Isophorone diamine: LC50 = 110 mg/l, brachydanio rerio, 96 h. EC50 = 44 mg/l, daphnia magna, 24 h; harmful. EC50 = 37 mg/l, green algae (scenedesmus subspicatus), 72 h; harmful.

Trimethyl hexamethylene diamine: LC50 = 174 mg/l, leuciscus idus, 48 h. EC50 = 31,5 mg/l, daphnia magna, 24 h; harmful. EC50 = 29,5 mg/l, green algae (scenedesmus subspicatus), 72 h; harmful.

12.3 Persistence and degradability**12.3.1 Biodegradation**

Isophorone diamine: 8 %, EY 79/831
Trimethyl hexamethylen diamine: 7 %, DOC die away test

12.4 Bioaccumulative potential

Isophorone diamine: octanol/water partition coefficient log Pow = 0,79
Trimethyl hexamethylene diamine: octanol/water partition coefficient log Pow = 0,77

12.6 Other adverse effects

There is no data available on the preparation itself. The product should not be allowed to enter drains or water courses.

13. DISPOSAL CONSIDERATIONS

13.1 Product residues: Gather residues into waste containers. Destroy according to the rules given by local authorities. EWC-code for liquid waste is e.g 08 01 11 (waste paint and varnish containing organic solvents or other dangerous substances). The ready for use mixture of paint and hardener generates much heat. Allow the remainder of the mixture to harden in a safe place, e.g. in the open.

13.2 Packaging waste: Empty cans should be recycled or disposed of in accordance with local regulations.

14. TRANSPORT INFORMATION

14.1	UN No	3469
14.2	Packing group	III
14.3	Land transport	
14.3.1	ADR/RID Class	3(8)
14.3.3	Description of the goods	paint related material, flammable, corrosive
14.4	Sea transport	
14.4.1	IMDG Class	3(8)
14.4.2	Proper shipping name	paint related material, flammable, corrosive
14.4.3	Further Information	EmS: F-E,S-C
14.5	Air transport	
14.5.1	ICAO/IATA Class	3(8)
14.5.2	Proper shipping name	paint related material, flammable, corrosive

15. REGULATORY INFORMATION

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15.1	Information on the warning label
15.1.1	Letter code of the warning symbol and indications of danger for the preparation
	C Corrosive
15.1.2	Names of the ingredients given on the warning label
	Isophorone diamine
	Trimethyl hexamethylene diamine
	Xylene
15.1.3	R-phrase(s)
	R10 Flammable.
	R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
	R34 Causes burns.
	R43 May cause sensitization by skin contact.
	R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
15.1.4	S-phrase(s)
	S23D 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.
	S29 Do not empty into drains.
	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 the label where possible).
	S51 Use only in well-ventilated areas.

16. OTHER INFORMATION

16.1	Full text of R-phrases referred to under sections 2 and 3
	R37/38 Irritating to respiratory system and skin.
	R11 Highly flammable.
	R20 Harmful by inhalation.
	R10 Flammable.
	R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
	R34 Causes burns.
	R43 May cause sensitization by skin contact.
	R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	R20/21 Harmful by inhalation and in contact with skin.
	R20/22 Harmful by inhalation and if swallowed.
	R21/22 Harmful in contact with skin and if swallowed.
	R22 Harmful if swallowed.
	R38 Irritating to skin.
	R41 Risk of serious damage to eyes.
	R67 Vapours may cause drowsiness and dizziness.
16.4	Additional information
	The information of this MSDS is based on the present state of our knowledge and on current EC laws. It is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the products' properties.
	Additional information available from: Tikkurila Oy, Product Safety, P.O. Box 53, FIN-01301 VANTAA, FINLAND, Telephone +358 9 857 71, Fax +358 9 8577 6936, E-mail: productsafety@tikkurila.com
	Signature d0/j2/niear