

HARDENER 008 5609

Date 9.9.2010

Previous date: 28.5.2008

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

HARDENER 008 5609

1.1.2 Product code

008 5609

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

Painting work

Description: Hardener for epoxy paint

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

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

Tikkurila Oyj, 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

25 - 50 %

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

1330-20-7

215-535-7

Xylene

5 - 10 %

Xn; R10-20/21-38

100-51-6

202-859-9

Benzyl alcohol

25 - 50 %

Xn; R20/22

1477-55-0

216-032-5

m-Xylylene diamine

1 - 10 %

C; R20/22-35-43-52/53

100-41-4

202-849-4

Ethylbenzene

1 - 5 %

F, Xn; R11-20

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

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

4.2 Inhalation

Remove to fresh air, keep patient warm and at rest.

HARDENER 008 5609

Date 9.9.2010

Previous date: 28.5.2008

- 4.3 Skin contact**
Remove contaminated clothing immediately. 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 skin and eye contact.
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) |
| m-Xylylene diamine (TLV-C) | 0,1 mg/m ³ (15 min) |
- 8.1.2 Information on limit values**
TLV-TWA = Threshold Limit Values - Time-weighted average / ACGIH 2009
TLV-C = Threshold Limit Values - Ceiling limit / ACGIH 2007
- 8.2 Exposure controls**
- 8.2.1 Occupational exposure controls**
Provide adequate ventilation. Comply with the health and safety at work laws.

HARDENER 008 5609

Date 9.9.2010

Previous date: 28.5.2008

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 spray-application use respirators with gas, vapour and dust filter AP. 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

Protective clothing must be used.

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 1,0 vol-% *)

9.2.5.2 Upper explosion limit 7,0 vol-% *)

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

9.2.8 Relative density 1,03

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

Causes burns.

11.3 Sensitisation

Contains isophorone diamine and m-xylene diamine. May cause sensitization by skin contact.

11.5 Human experience

HARDENER 008 5609

Date 9.9.2010

Previous date: 28.5.2008

11.5.1 Inhalation: Solvent vapours and spray mist 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.

12.3 Persistence and degradability**12.3.1 Biodegradation**

Isophorone diamine: 8 %, EY 79/831

12.4 Bioaccumulative potential

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

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).

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

14. TRANSPORT INFORMATION

14.1	UN No	2733
14.2	Packing group	III
14.3	Land transport	
14.3.1	ADR/RID Class	3 (8)
14.3.3	Description of the goods	AMINES, FLAMMABLE, CORROSIVE, N.O.S. (isophorone diamine, xylene)
14.4	Sea transport	
14.4.1	IMDG Class	3 (8)
14.4.2	Proper shipping name	AMINES, FLAMMABLE, CORROSIVE, N.O.S. (isophorone diamine, xylene)
	Marine pollutant	no
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	AMINES, FLAMMABLE, CORROSIVE, N.O.S. (isophorone diamine, xylene)

15. REGULATORY INFORMATION

HARDENER 008 5609

Date 9.9.2010

Previous date: 28.5.2008

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
	M-xylylene diamine
	Xylene
	Benzyl alcohol
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)
	S23 Do not breathe vapour/spray.
	S24 Avoid contact with the 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.
	S38 In case of insufficient ventilation, wear suitable respiratory equipment.
	S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

16. OTHER INFORMATION

16.1	Full text of R-phrases referred to under sections 2 and 3
	R35 Causes severe burns.
	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.
	R38 Irritating to skin.
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 Oyj, 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 a.j/near