

**TEMAFLOOR 400 HARDENER**

Date 2.12.2009

Previous date: 3.7.2007

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

TEMAFLOOR 400 HARDENER

**1.1.2 Product code**

008 4404

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

Painting work.

Description: A hardener for a solvent free epoxy varnish.

**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**

Corrosive, C

Harmful by inhalation, in contact with skin and if swallowed. 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

100-51-6

202-859-9

Benzyl alcohol

25 - 50 %

Xn; R20/22

**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.

**4.3 Skin contact**

Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleanser.

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**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, CO<sub>2</sub>, 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 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**

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****8.2 Exposure controls****8.2.1 Occupational exposure controls**

Provide adequate ventilation. Comply with the health and safety at work laws.

**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.

**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.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>9.1</b>	<b>General Information (appearance, odour)</b> Viscous liquid, strong odour	
<b>9.2</b>	<b>Important Health Safety and Environmental Information</b>	
<b>9.2.2</b>	<b>Boiling point/range</b>	-
<b>9.2.3</b>	<b>Flash point</b>	-
<b>9.2.5</b>	<b>Explosive properties</b>	
<b>9.2.5.1</b>	<b>Lower explosion limit</b>	-
<b>9.2.5.2</b>	<b>Upper explosion limit</b>	-
<b>9.2.7</b>	<b>Vapour pressure</b>	-
<b>9.2.8</b>	<b>Relative density</b>	0,98
<b>9.2.9</b>	<b>Solubility</b>	
<b>9.2.9.1</b>	<b>Water solubility</b>	Insoluble

**10. STABILITY AND REACTIVITY**

<b>10.1</b>	<b>Conditions to avoid</b> If solvents are used to lower the viscosity, it should be noticed, that solvent vapours may form explosive mixtures with air.
<b>10.2</b>	<b>Materials to avoid</b> Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.
<b>10.3</b>	<b>Hazardous decomposition products</b> Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

**11. TOXICOLOGICAL INFORMATION**

<b>11.1</b>	<b>Acute toxicity</b> See section 11.5.
<b>11.2</b>	<b>Primary irritation</b> Strongly irritating to the skin and eyes. May cause burns. See section 11.5
<b>11.3</b>	<b>Sensitisation</b> Exposure by inhalation and skin contact may cause sensitization.
<b>11.5</b>	<b>Human experience</b> 11.5.1 Inhalation: Long term exposure causes irritation of respiratory system and mucous membranes of nose and throat. 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**

<b>12.1</b>	<b>Ecotoxicity</b>
<b>12.1.1</b>	<b>Aquatic toxicity</b> 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.
<b>12.3</b>	<b>Persistence and degradability</b>
<b>12.3.1</b>	<b>Biodegradation</b> Isophorone diamine: 8 %, EY 79/831
<b>12.4</b>	<b>Bioaccumulative potential</b> Isophorone diamine: octanol/water partition coefficient log Pow = 0,79

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**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: Empty cans should be recycled or disposed of in accordance with local regulations.

**14. TRANSPORT INFORMATION**

14.1	UN No	2289
14.2	Packing group	III
14.3	Land transport	
14.3.1	ADR/RID Class	8
14.3.3	Description of the goods	isophorone diamine mixture
14.4	Sea transport	
14.4.1	IMDG Class	8
14.4.2	Proper shipping name	isophorone diamine mixture
14.4.3	Further Information	EmS: F-A,S-B
14.5	Air transport	
14.5.1	ICAO/IATA Class	8
14.5.2	Proper shipping name	isophorone diamine mixture

**15. REGULATORY INFORMATION**

15.1	<b>Information on the warning label</b>	
15.1.1	<b>Letter code of the warning symbol and indications of danger for the preparation</b>	
	C	Corrosive
15.1.2	<b>Names of the ingredients given on the warning label</b>	
	Isophorone diamine	
	Benzyl alcohol	
15.1.3	<b>R-phrase(s)</b>	
	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	<b>S-phrase(s)</b>	
	S23	Do not breathe vapour/spray.
	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.

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**16. OTHER INFORMATION****16.1 Full text of R-phrases referred to under sections 2 and 3**

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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.
R20/22	Harmful by inhalation and if swallowed.
R21/22	Harmful in contact with skin and if swallowed.

**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**

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