

Date 18.6.2010

Previous date: 7.4.2008

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

### 1.1 Identification of the article

1.1.1 **Commercial Product Name**  
FONTEZINC HARDENER

1.1.2 **Product code**  
930 2760

### 1.2 Use of the Substance/Preparation

1.2.1 **Intended use**  
Painting work.  
Description: A waterbased 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 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

Irritant, Xi

Irritating to eyes and skin. 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		3.1.2	3.1.3	3.1.4
CAS number	EINECS	Chemical name of the substance	Concentration	Classification
2855-13-2	220-666-8	Isophorone diamine	1 - 5 %	C; R21/22-34-43-52/53
1477-55-0	216-032-5	m-Xylylene diamine	1 - 5 %	C; R20/22-35-43-52/53
-	-	Polyamine adduct	10 - 25 %	N; R51/53

## 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

- 8.1 Exposure Limit Values**
- 8.1.1 Occupational exposure limit values**  
m-Xylylene diamine (TLV-C) 0,1 ppm (15 min)
- 8.1.2 Information on limit values**  
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.
- 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.

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- 8.2.1.3 Eye protection**  
Safety eyewear must be used, specially during spray-application.
- 8.2.1.4 Skin and body protection**  
Use suitable protective clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 General Information (appearance, odour)**  
Viscous liquid
- 9.2 Important Health Safety and Environmental Information**
- 9.2.2 Boiling point/range** -
- 9.2.3 Flash point** -
- 9.2.5 Explosive properties**
- 9.2.5.1 Lower explosion limit** -
- 9.2.5.2 Upper explosion limit** -
- 9.2.7 Vapour pressure** -
- 9.2.8 Relative density** 1,02
- 9.2.9 Solubility**
- 9.2.9.1 Water solubility** Soluble

## 10. STABILITY AND REACTIVITY

- 10.1 Conditions to avoid**  
If solvents are used to lower the viscosity, it should be noticed, that 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**  
See section 11.5.
- 11.3 Sensitisation**  
Contains isophorone diamine and m-xylylene diamine. Exposure by inhalation and skin contact may cause sensitization.
- 11.5 Human experience**
- 11.5.1 Inhalation: Spray mist causes irritation of mucous membranes of nose and throat and respiratory system.
- 11.5.2 Skin contact: Spray mist and splashes may cause skin and eye irritation.
- 11.5.3 Other effects: Harmful if taken internally.

## 12. ECOLOGICAL INFORMATION

- 12.1 Ecotoxicity**
- 12.1.1 Aquatic toxicity**

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M-xylilylenediamine: LC50 = 155,88 mg/l, oryzias latipes, 48 h  
 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**

M-xylilylenediamine: 22 % (BOD, 22 d)

Isophorone diamine: 8 %, EY 79/831

**12.4 Bioaccumulative potential**

M-xylilylenediamine: Non-accumulative or low accumulative.

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

**14. TRANSPORT INFORMATION**

<b>14.1</b>	<b>UN No</b>	-
<b>14.2</b>	<b>Packing group</b>	-
<b>14.3</b>	<b>Land transport</b>	
<b>14.3.1</b>	<b>ADR/RID Class</b>	not classified
<b>14.4</b>	<b>Sea transport</b>	
<b>14.4.1</b>	<b>IMDG Class</b>	not classified
<b>14.4.2</b>	<b>Proper shipping name</b>	
	<b>Marine pollutant</b>	no
<b>14.5</b>	<b>Air transport</b>	
<b>14.5.1</b>	<b>ICAO/IATA Class</b>	not classified

**15. REGULATORY INFORMATION****15.1 Information on the warning label****15.1.1 Letter code of the warning symbol and indications of danger for the preparation**

Xi Irritant

**15.1.2 Names of the ingredients given on the warning label**

Isophorone diamine

m-Xylylene diamine

Polyamine adduct

**15.1.3 R-phrases(s)**

R36/38 Irritating to eyes and skin.

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-phrases(s)**

S23 Do not breathe spray.

S24 Avoid contact with skin.

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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	Wear suitable protective clothing and gloves.
S51	Use only in well-ventilated areas.

## 16. OTHER INFORMATION

### 16.1 Full text of R-phrases referred to under sections 2 and 3

R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R36/38	Irritating to eyes and skin.
R43	May cause sensitization by skin contact.
R20/22	Harmful by inhalation and if swallowed.
R21/22	Harmful in contact with skin and if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R34	Causes burns.
R35	Causes severe burns.

### 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](mailto:productsafety@tikkurila.com)

**Signature**

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