FONTEDUR FL MATT HARDENER

Date 10.11.2010 Previous date: 22.6.2009

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

1.1 Identification of the article

1.1.1 Commercial Product Name

FONTEDUR FL MATT HARDENER

1.1.2 Product code

008 4911

1.2 Use of the Substance/Preparation

1.2.1 Intended use

Painting work.
Description: Isocyanate hardener
Only for industrial and professional use. The product is not intended for consumer use.

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
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
822-06-0	212-485-8	Hexamethylene-1,6-diisocyanate (HDI)	< 0,5 %	T; R23-36/37/38-42/43
28182-81-2	500-060-2	Polyisocyanate resin	20 - 50 %	Xi; R43-52/53
-	-	Polyisocyanate resin	50 - 80 %	Xi; R43-52/53

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. When symptoms persist or in all cases of doubt seek medical advice. If unconscious place in recovery position and seek medical advice. Give artificial respiration if breathing has stopped.

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 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 suitable container. The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts) / ethanol or isopropanol (50 parts) / concentrated ammonia (5 parts). A non-flammable alternative is sodium carbonate (5 parts) / water (95 parts). Add the same decontaminant to the remnants and let stand for several days in non-sealed container until no further reaction. Once this stage is reached, close container and dispose of according to local regulations.

7. HANDLING AND STORAGE

7.1 Handling

Avoid skin and eye contact. 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. Precautions should be taken to minimize exposure to atmospheric humidity or water: carbon dioxide will be formed which in closed containers can result in pressurisation. Care should be taken when re-opening partly used containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Limit Values

8.1.1 Occupational exposure limit values

Hexamethylene-1,6-diisocyanate (HDI)	0,005 ppm (8 h)

8.1.2 Information on limit values

TLV-TWA = Threshold Limit Values - Time-weighted average according to ACGIH 2009 (American Conference of Governmental Industrial Hygienists)

8.2 Exposure controls

8.2.1 Occupational exposure controls

Provide adequate ventilation. When handling paints containing isocyanates all precautions required for solvent-containing paints must be followed. Vapour and spray mist in particular should not be inhaled. Allergics and asthmatics as well as people prone to respiratory ailments should not work with isocyanate containing paints. Comply with the health and safety at work laws.

8.2.1.1 Respiratory protection

If ventilation is insufficient, use appropriate certified respirators with gas, vapour and dust filter AP. During spray-application or during continuous and long-term work, an air-fed protective respiratory equipment must be worn even when good ventilation is provided.

8.2.1.2 Hand protection

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

8.2.1.3 Eye protection

Use safety eyewear designed to protect against splashes of liquids.

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, strong odour

9.2 Important Health Safety and Environmental Information

9.2.2	**Boiling point/range**	-
9.2.3	**Flash point**	184 °C
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**	1,2
9.2.9	**Solubility**	
9.2.9.1	**Water solubility**	Insoluble, reacts with water.

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid

10.2 Materials to avoid

Keep away from oxidizing agents, strongly alkaline and strongly acid materials, amines and alcohols. Uncontrolled exothermic reactions occur with amines and alcohols. Reacts with water resulting in evolution of carbon dioxide (CO_2). In closed containers, the pressure build up could result in bursting of the container.

10.3 Hazardous decomposition products

Fire will produce dense black smoke. Hazardous decomposition products, such as smoke, carbon monoxide, oxides of nitrogen, hydrogen cyanide and isocyanate compounds, may be produced in a fire or when exposed to high temperatures -e.g. when welding or flame cutting a painted surface. 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
Exposure by inhalation and skin contact may cause sensitization. Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and a tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

11.5 Human experience
11.5.1 Inhalation: Long term exposure causes irritation of respiratory system and mucous membranes of nose and throat.
11.5.2 Skin contact: Repeated or prolonged contact with the preparation may cause removal of the natural fat from the skin resulting in contact dermatitis. Splashes in the eyes may cause irritation.
11.5.3 Other effects: Harmful if taken internally.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity
12.1.1 Aquatic toxicity
Aliphatic polyisocyanate resin: LC50= 10-100 mg/l, brachydanio rerio, 96 h; harmful. EC50 >= 100 mg/l, daphnia magna, 48 h.

12.3 Persistence and degradability
12.3.1 Biodegradation
Aliphatic polyisocyanate resin: < 60 %, 28 d; not readily degradable (OECD 301F).

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 hardener reacts with water resulting in evolution of carbon dioxide (CO_2). The ready for use mixture of paint and hardener will form carbon dioxide which in closed containers can result in pressurisation.
13.2 Packaging waste: Empty cans should be recycled or disposed of in accordance with local regulations.

14. TRANSPORT INFORMATION

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

Isocyanate resin

15.1.3 R-phrase(s)

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.
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.

15.1.5 Special regulations on certain preparations

Contains isocyanates. See information supplied by the manufacturer.

16. OTHER INFORMATION

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

R43	May cause sensitization by skin contact.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R23	Toxic by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitization by inhalation and skin contact.

16.3 Recommended restrictions

Only for industrial and professional use. The product is not intended for consumer use.

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

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