

TEMAFLOOR PU HARDENER

Date 3.12.2010

Previous date: 18.10.2010

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**1.1 Identification of the article****1.1.1 Commercial Product Name**
TEMAFLOOR PU HARDENER**1.1.2 Product code**

008 4011

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

Painting work

Description: Hardener for polyurethane coating.

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**Classification and labelling in accordance with CLP Regulation (EC) 1272/2008:**

Danger

Carcinogenicity cat.2/H351: Suspected of causing cancer if inhaled.

Specific target organ toxicity - repeated exposure cat.2/H373: May cause damage to respiratory system through prolonged or repeated exposure.

Respiratory sensitisation cat.1/H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitisation cat.1/H317: May cause an allergic skin reaction.

Acute toxicity cat.4/H332: Harmful if inhaled.

Eye irritation cat.2/H319: Causes serious eye irritation.

Skin irritation cat.2/H315: Causes skin irritation.

Specific target organ toxicity - single exposure cat.3/H335: May cause respiratory irritation.

Labelling in accordance with Directives 67/548/EEC and 1999/45/EC:

Harmful, Xn

Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation. May cause sensitization by inhalation and skin contact. Harmful by inhalation. Irritating to eyes, respiratory system and skin.

Information on hazard labelling in section 15.1.

TEMAFLOOR PU HARDENER

Date 3.12.2010

Previous date: 18.10.2010

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1	Hazardous components		3.1.2	3.1.3	3.1.4
3.1.1	CAS number	EINECS	Chemical name of the substance	Concentration	Classification
	9016-87-9	-	Diphenylmethane diisocyanate, isomers and homologues	50 - 75 %	Xn; R20-36/37/38-40-42/43-48/20 Carc.2/H351, STOT RE 2/H373, Acute Tox.4/H332, Eye Irrit.2/H319, STOT SE 3/H335, Skin Irrit.2/H315, Resp.Sens.1/H334, Skin Sens.1/H317
	32055-14-4	500-079-6	Oligomeric MDI (formaldehyde, oligomeric reaction products with aniline and phosgene)	25 - 50 %	Xn; R20-36/37/38-40-42/43-48/20 Carc.2/H351, STOT RE 2/H373, Acute Tox.4/H332, Eye Irrit.2/H319, STOT SE 3/H335, Skin Irrit.2/H315, Resp.Sens.1/H334, Skin Sens.1/H317

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. If breathing is irregular or stopped, administer artificial respiration and seek medical advice.
- 4.3 Skin contact**
Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation occurs seek medical advice.
- 4.4 Eye contact**
Irrigate copiously with clean, fresh water for at least 15 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.

TEMAFLOOR PU HARDENER

Date 3.12.2010

Previous date: 18.10.2010

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 (evolution of CO₂!) 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
Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not work with isocyanate containing products.
Avoid contact with skin and eyes. Avoid breathing vapours. 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
Diphenylmethane 0,005 ppm (8 h)
diisocyanate,
isomers and homologues

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
During continuous and long-term work, an air-fed protective respiratory equipment must be worn even when good ventilation is provided. During short periods of work: air-fed respirators could be replaced by appropriate certified respirators with gas, vapour and dust filter AP.

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

8.2.1.3 Eye protection
Use safety eyewear.

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

TEMAFLOOR PU HARDENER

Date 3.12.2010

Previous date: 18.10.2010

9.2	Important Health Safety and Environmental Information	
9.2.2	Boiling point/range	-
9.2.3	Flash point	229 °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	about 1,1 kPa (20 °C)
9.2.8	Relative density	1,23
9.2.9	Solubility	
9.2.9.1	Water solubility	Insoluble

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, amines and alcohols. Uncontrolled exothermic reactions occur with amines and alcohols. Reacts with water resulting in evolution of carbon dioxide (CO₂). 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.

11.4 Subacute, subchronic and prolonged toxicity

Diphenylmethane diisocyanate is classified as carcinogenic, category 2, according to CLP-regulation.

Suspected of causing cancer if inhaled.

May cause damage to respiratory system through prolonged or repeated exposure.

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**12.6 Other adverse effects**

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

TEMAFLOOR PU HARDENER

Date 3.12.2010

Previous date: 18.10.2010

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	-
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
14.5	Air transport	
14.5.1	ICAO/IATA Class	not classified

15. REGULATORY INFORMATION

Signal Word: Danger

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

Diphenylmethane diisocyanate

GHS07	Pictogram: exclamation mark		
GHS08	Pictogram: health hazard		
H332	Harmful if inhaled.		
H319	Causes serious eye irritation.		
H335	May cause respiratory irritation.		
H315	Causes skin irritation.		
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.		
H317	May cause an allergic skin reaction.		
H351A	Suspected of causing cancer if inhaled.		
H373K	May cause damage to respiratory system through prolonged or repeated exposure.		
EUH204	Contains isocyanates. May produce an allergic reaction.		
P261C	Avoid breathing vapours.		
P285	In case of inadequate ventilation wear respiratory protection.		
P280	Wear protective gloves/protective clothing/eye protection/face protection.		
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.		
P312	Call a POISON CENTER or doctor/physician if you feel unwell.		
P302+P352	IF ON SKIN: Wash with plenty of soap and water.		
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.		

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

R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R40	Limited evidence of a carcinogenic effect.
R42/43	May cause sensitization by inhalation and skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Full text of Hazard statements (H-statements) referred to under sections 2 and 3

TEMAFLOOR PU HARDENER

Date 3.12.2010

Previous date: 18.10.2010

H351:	Suspected of causing cancer if inhaled.
H373:	May cause damage to respiratory system through prolonged or repeated exposure.
H332:	Harmful if inhaled.
H319:	Causes serious eye irritation.
H335:	May cause respiratory irritation.
H315:	Causes skin irritation.
H334:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317:	May cause an allergic skin reaction.

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

Signature

f0,d2/ome