

**HARDENER 008 7640**

Date 29.6.2011

Previous date: 4.4.2008

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier****1.1.1 Commercial Product Name**

HARDENER 008 7640

**1.1.2 Product code**

008 7640

**1.2 Relevant identified uses of the substance or mixture and uses advised against****1.2.1 Recommended use**

Painting work.

Description: A polyurethane hardener

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

**1.3 Details of the supplier of the safety data sheet****1.3.1 Supplier**

Tikkurila Oyj

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**Postcode and post office**

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FINLAND

**Telephone**

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**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****2.1 Classification of the substance or mixture****67/548/EEC - 1999/45/EC**

Xi; R10-43-67-52/53

**2.2 Label elements****67/548/EEC - 1999/45/EC**

Xi Irritant

**R-phrases(s)**

R10 Flammable.

R43 May cause sensitization by skin contact.

R67 Vapours may cause drowsiness and dizziness.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**S-phrases(s)**

S23 Do not breathe vapour/spray.

S38 In case of insufficient ventilation, wear suitable respiratory equipment.

S24 Avoid contact with skin.

S36/37 Wear suitable protective clothing and gloves.

S29 Do not empty into drains.

**Contains:**

Butyl acetate and aliphatic polyisocyanate resin

**Special regulations on certain preparations**

Contains isocyanates. See information supplied by the manufacturer.

**2.3 Other hazards**

Other hazards are not known.



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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

3.2 Mixtures				
Hazardous components				
CAS number	EINECS	Chemical name of the substance	Concentration	Classification
28182-81-2	500-060-2	Aliphatic polyisocyanate resin	50 - 75 %	Xi; R43
123-86-4	204-658-1	Butyl acetate	25 - 50 %	-; R10-66-67
64742-95-6	265-199-0	Solvent naphtha, light aromatic	1 - 5 %	Xn, N; R10-37-65-66-67-51/53
64742-94-5	265-198-5	Solvent naphtha, heavy aromatic	1 - 5 %	Xn, N; R65-66-67-51/53
108-65-6	203-603-9	2-Methoxy-1-methylethyl acetate	1 - 5 %	-; R10
822-06-0	212-485-8	Hexamethylene-1,6-diisocyanate (HDI)	< 0,5 %	T; R23-36/37/38-42/43

**3.3 Other information**

Solvent naphtha, light aromatic and Solvent naphtha, heavy aromatic : contains benzene less than 0,1 w-%. See Section 16 for full text of R-phrases and H-statements.

**4. FIRST AID MEASURES****4.1 Description of first aid measures**

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

**4.1.2 Inhalation**

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Seek medical attention.

**4.1.3 Skin contact**

Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

**4.1.4 Eye contact**

Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 15 minutes and seek medical advice if necessary.

**4.1.5 Ingestion**

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

**4.2 Most important symptoms and effects, both acute and delayed**

May cause sensitization by skin contact. Vapours may cause drowsiness and dizziness.

**4.3 Indication of immediate medical attention and special treatment needed**

None.

**5. FIREFIGHTING MEASURES****5.1 Extinguishing media****5.1.1 Suitable extinguishing media**

Recommended: Alcohol resistant foam, CO<sub>2</sub>, powders or water spray/mist.

**5.1.2 Extinguishing media which must not be used for safety reasons**

Do not use strong water jets.

**5.2 Special hazards arising from the substance or mixture**

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required.

**5.3 Advice for firefighters**

Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains or water courses.

**HARDENER 008 7640**

Date 29.6.2011

Previous date: 4.4.2008

**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Exclude sources of ignition and ventilate the area. Avoid breathing vapours. Avoid skin contact with the product. Refer to protective measures listed in sections 7 and 8.

**6.2 Environmental precautions**

Do not allow to enter drains or water courses.

**6.3 Methods and materials for containment and 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.

**6.4 Reference to other sections**

See also Section 13 for waste disposal instructions.

**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this mixture is used.

Vapours are heavier than air and may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Isolate from sources of heat, sparks and open flame. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. No sparking tools should be used. Avoid skin and eye contact. Avoid inhalation of vapour and spray mist. Avoid inhalation of dust from sanding. Smoking, eating and drinking should be prohibited in application area.

Precautions should be taken to minimise exposure to atmospheric humidity or water: CO<sub>2</sub> will be formed which in closed containers can result in pressurisation. Care should be taken when re-opening partly used containers.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in a cool, dry, well ventilated place away from sources of heat and direct sunlight. Keep away from sources of ignition. No smoking. Keep away from oxidising agents, from strongly alkaline and strongly acid materials as well as amines, alcohols and water. Keep container tightly closed.

**7.3 Specific end use(s)**

None.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****8.1.1 Occupational exposure limit values**

Butyl acetate (TLV)	150 ppm (8 h)	200 ppm (15 min)
Hexamethylene-1,6-di-isocyanate (TLV)	0,005 ppm (8 h)	
2-Methoxy-1-methylethyl acetate (EU)	50 ppm (8 h) Skin	100 ppm (15 min)

**8.1.2 Other information on limit values**

**HARDENER 008 7640**

Date 29.6.2011

Previous date: 4.4.2008

TLV = Threshold Limit Values according to ACGIH 2009 (American Conference of Governmental Industrial Hygienists)

EU = Occupational Exposure Limit Values according to EU Directives 1998/24/EC, 2000/39/EC, 2006/15/EC, 2009/161/EU.

Skin = A skin notation assigned to the occupational exposure limit value indicates the possibility of significant uptake through the skin.

**8.2 Exposure controls****8.2.1 Appropriate engineering controls**

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this mixture is used.

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by spray operator even when good ventilation is provided.

**8.2.2 Individual protection measures****8.2.2.1 Respiratory protection**

When spraying: air fed respirator. For operations other than spraying: In well ventilated areas, air-fed respirators could be replaced by a combination of charcoal filter and particulate filter mask.

**8.2.2.2 Hand protection**

Always wear approved protective gloves against chemicals.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Gloves should be replaced regularly. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Recommended protective glove type is e.g.:

nitrile rubber (splash protection),

fluoro rubber (splash protection)

laminated foil (breakthrough time > 480 min.)

PVC or natural rubber gloves are not recommended.

**8.2.2.3 Eye/face protection**

Use safety eyewear designed to protect against splash of liquids.

**8.2.2.4 Skin protection**

Personnel should wear protective clothing.

When necessary, wear anti-static protective clothing made of natural fibre or of high temperature resistant synthetic fibre.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Important Health Safety and Environmental Information****9.1.1 Appearance**

Viscous liquid, strong odour

**9.1.6 Initial boiling point and boiling range** 123 - 128 °C \*)

**9.1.7 Flash point** 23 °C \*)

**9.1.10 Explosive properties**

**9.1.10.1 Lower explosion limit** 1,2 vol-% \*)

**9.1.10.2 Upper explosion limit** 7,5 vol-% \*)

**9.1.11 Vapour pressure** 1,3 kPa (20 °C) \*)

**9.1.13 Relative density** 1,1

**9.1.14 Solubility(ies)**

**9.1.14.1 Water solubility** Insoluble

**9.2 Other information**

Evaporation rate (BuAc=1) : 1,0 \*)

\*) = Butyl acetate

**HARDENER 008 7640**

Date 29.6.2011

Previous date: 4.4.2008

**10. STABILITY AND REACTIVITY**

- 10.1 Reactivity**  
See section 10.5.
- 10.2 Chemical stability**  
Stable under recommended storage and handling conditions (see section 7).
- 10.3 Possibility of hazardous reactions**  
See section 10.5.
- 10.4 Conditions to avoid**  
In confined or poorly ventilated spaces solvent vapours may form explosive mixtures with air. When exposed to high temperatures may produce hazardous decomposition products.
- 10.5 Incompatible materials**  
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<sub>2</sub>). In closed containers, the pressure build up could result in bursting of the container.
- 10.6 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 Information on toxicological effects**  
There are no toxicological test data available on the product itself.
- 11.1.3 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.
- 11.1.8 Other information on acute toxicity**  
**Inhalation:** Long term exposure to spray mist or solvent vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.  
**Skin contact:** Repeated or prolonged contact with the preparation causes removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.  
**Ingestion:** Ingestion may cause nausea, diarrhoea and vomiting.

**12. ECOLOGICAL INFORMATION**

- 12.1 Toxicity**
- 12.1.1 Aquatic toxicity**  
Solvent naphtha, light aromatic: LC50 = 1-10 mg/l, fish, crustacean, algae (estimate); toxic  
Solvent naphtha, heavy aromatic: LL50 = 18 mg/l, rainbow trout, 96 h; harmful
- 12.2 Persistence and degradability**
- 12.2.1 Biodegradation**  
Solvent naphtha, light aromatic: 78 %, 28 d; readily biodegradable  
Solvent naphtha, heavy aromatic: 58 %, 28 d; inherently biodegradable

**HARDENER 008 7640**

Date 29.6.2011

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- 12.3 Bioaccumulative potential**  
Solvent naphtha, light aromatic: octanol/water partition coefficient log Pow = 3,7-4,5 (estimate)  
Solvent naphtha, heavy aromatic: octanol/water partition coefficient log Kow = 3,3-4,9
- 12.4 Mobility in soil**  
No data available.
- 12.5 Results of PBT and vPvB assessment**  
No data available.
- 12.6 Other adverse effects**  
There is no ecotoxicological test data available on the product itself. The product should not be allowed to enter drains or water courses.

**13. DISPOSAL CONSIDERATIONS**

- 13.1 Waste treatment methods**  
**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).  
**Packaging waste:**  
Empty cans should be recycled or disposed of in accordance with local regulations.

**14. TRANSPORT INFORMATION**

- 14.1 UN number** 1263
- 14.2 UN proper shipping name** paint related material
- 14.3 Transport hazard class(es)** 3
- 14.4 Packing group** III
- 14.5 Environmental hazards**  
The product is not classified as environmentally hazardous according to international transport regulations.
- 14.6 Special precautions for users**  
None known.
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
None known.
- 14.8 Further Information**  
EmS: F-E,S-E

**15. REGULATORY INFORMATION**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
None known.
- 15.2 Chemical safety assessment**  
Has not been performed.

**16. OTHER INFORMATION**

- 16.5 Full text of R-phrases and/or Hazard statements (H-statements) referred to under sections 2 and 3**
- |           |   |
|-----------|---|
| R10       | Flammable.  |
| R23       | Toxic by inhalation.                                    |
| R36/37/38 | Irritating to eyes, respiratory system and skin.        |
| R37       | Irritating to respiratory system.                       |
| R42/43    | May cause sensitization by inhalation and skin contact. |
| R43       | May cause sensitization by skin contact.                |

**HARDENER 008 7640**

Date 29.6.2011

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R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

**16.8 Additional information**

This Safety Data Sheet is prepared in accordance with Annex II (EU) No 453/2010 to Regulation (EC) No 1907/2006 (REACH).

The information contained in this Safety Data Sheet is based on the present state of knowledge and current EU and national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

Additional information available from:

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**Signature**

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