

**DUASOLID HARDENER 008 7675**

Date 13.12.2010

Previous date: 20.7.2010

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

- 1.1 Identification of the article**
- 1.1.1 Commercial Product Name**  
DUASOLID HARDENER 008 7675
- 1.1.2 Product code**  
008 7675
- 1.2 Use of the Substance/Preparation**
- 1.2.1 Intended use**  
Painting work  
Description: A hardener for oxirane ester paint.
- 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**

Flammable.  
Toxic, T  
May cause cancer.  
Vapours may cause drowsiness and dizziness.  
Information on hazard labelling in section 15.1.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

3.1	Hazardous components		3.1.2 Chemical name of the substance	3.1.3 Concentration	3.1.4 Classification
	3.1.1 CAS number	EINECS			
	123-86-4	204-658-1	Butyl acetate	25 - 50 %	-; R10-66-67
	1330-20-7	215-535-7	Xylene	5 - 10 %	Xn; R10-20/21-38
	100-41-4	202-849-4	Ethylbenzene	1 - 5 %	F, Xn; R11-20
	115-28-6	204-078-9	Chlorendic acid (1,4,5,6,7,7-hexachloro-8,9,10-trinorborn-5-ene-2,3-dicarboxylic acid)	0,1 - 2 %	T; R45-36/37/38

**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.

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- 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, 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 and eye contact with the product. Avoid breathing vapours. Exclude sources of ignition.
- 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**  
Avoid contact with skin and eyes. Avoid breathing vapours.  
Vapours are heavier than air and may form explosive mixtures with air. 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**
- |                     |               |
|---------------------|---------------|
| Xylene (EU)         | 50 ppm (8 h)  |
| Ethylbenzene (EU)   | 100 ppm (8 h) |
| Xylene (TLV)        | 100 ppm (8 h) |
| Ethylbenzene (TLV)  | 100 ppm (8 h) |
| Butyl acetate (TLV) | 150 ppm (8 h) |
- 8.1.2 Information on limit values**  
EU = Occupational Exposure Limit Values according to EU Directives 1998/24/EC, 2000/39/EC, 2006/15/EC, 2009/161/EU.  
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. Comply with the health and safety at work laws.

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**8.2.1.1 Respiratory protection**

Use appropriate certified respirators, with gas, vapour and dust filter AP, 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. PVA, fluoro rubber or laminated foil) against chemicals. Gloves should be replaced regularly. Barrier creams may also help to protect the exposed areas of the skin.

**8.2.1.3 Eye protection**

Safety eyewear must be used, specially during spray-application.

**8.2.1.4 Skin and body protection**

Protective clothing must be used during spray-application.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 General Information (appearance, odour)**

Coloured, viscous liquid, strong odour.

**9.2 Important Health Safety and Environmental Information**

**9.2.2 Boiling point/range** 122 - 137 °C

**9.2.3 Flash point** + 27 °C

**9.2.5 Explosive properties**

**9.2.5.1 Lower explosion limit** 1 vol-%

**9.2.5.2 Upper explosion limit** 7,6 vol-%

**9.2.7 Vapour pressure** 1,2 kPa (20 °C) \*)

**9.2.8 Relative density** 1,25

**9.2.9 Solubility**

**9.2.9.1 Water solubility** Insoluble

**9.3 Other data**

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

\*) = Butyl acetate

**10. STABILITY AND REACTIVITY****10.1 Conditions to avoid**

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**

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**11.5 Human experience**

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11.5.1 Inhalation: Solvent vapours and spray mist harmful if inhaled. Long term exposure to component solvent vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache and dizziness.

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

The product contains chlorendic acid (1,4,5,6,7,7-hexachloro-8,9,10-trinorborn-5-ene-2,3-dicarboxylic acid). IARC (International Agency for Research on Cancer) has given chlorendic acid an overall evaluation of possibly carcinogenic to humans (group 2B). May cause cancer.

**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.

**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**

<b>14.1</b>	<b>UN No</b>	1263
<b>14.2</b>	<b>Packing group</b>	III
<b>14.3</b>	<b>Land transport</b>	
<b>14.3.1</b>	<b>ADR/RID Class</b>	3
<b>14.3.3</b>	<b>Description of the goods</b>	paint related material
<b>14.3.4</b>	<b>Further Information</b>	Drums/vessels < 450 litres: not subject to ADR because of high viscosity
<b>14.4</b>	<b>Sea transport</b>	
<b>14.4.1</b>	<b>IMDG Class</b>	3
<b>14.4.2</b>	<b>Proper shipping name</b>	paint related material
	<b>Marine pollutant</b>	no
<b>14.4.3</b>	<b>Further Information</b>	EmS: F-E,S-E Drums/vessels < 30 litres: Transport in accordance with paragraph 2.3.2.5 of the IMDG Code.
<b>14.5</b>	<b>Air transport</b>	
<b>14.5.1</b>	<b>ICAO/IATA Class</b>	3
<b>14.5.2</b>	<b>Proper shipping name</b>	paint related material

**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**

T Toxic

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

Butyl acetate

Chlorendic acid (1,4,5,6,7,7-hexachloro-8,9,10-trinorborn-5-ene-2,3-dicarboxylic acid)

**15.1.3 R-phrases(s)**

R10 Flammable.

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- R45 May cause cancer.  
R67 Vapours may cause drowsiness and dizziness.
- 15.1.4 S-phrases**  
S23 Do not breathe vapour/spray.  
S36/37 Wear suitable protective clothing and gloves.  
S38 In case of insufficient ventilation, wear suitable respiratory equipment.  
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S53 Avoid exposure - obtain special instructions before use.
- 15.1.5 Special regulations on certain preparations**  
Restricted to professional users.

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

- R11 Highly flammable.  
R20 Harmful by inhalation.  
R36/37/38 Irritating to eyes, respiratory system and skin.  
R10 Flammable.  
R45 May cause cancer.  
R20/21 Harmful by inhalation and in contact with skin.  
R38 Irritating to skin.  
R67 Vapours may cause drowsiness and dizziness.  
R66 Repeated exposure may cause skin dryness or cracking.

**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**

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