

**HARDENER 008 7380**

Date 31.1.2012

Previous date: 17.4.2008

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

HARDENER 008 7380

**1.1.2 Product code**

008 7380

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

Painting work.

Description: Hardener for a two component ethyl zinc silicate paint

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

Tikkurila Oyj

**P.O.Box**

P.O.Box 53

**Postcode and post office**

FI-01301 VANTAA

FINLAND

**Telephone**

+358 9 857 71

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+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 (Mon-Fri 8-16 Finnish time)

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

F, Xi; R11-36-67

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

F Highly flammable

Xi Irritant

**R-phrases(s)**

R11 Highly flammable.

R36 Irritating to eyes.

R67 Vapours may cause drowsiness and dizziness.

**S-phrases(s)**

S23 Do not breathe vapour/spray.

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

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S33 Take precautionary measures against static discharges.

S16 Keep away from sources of ignition - No smoking.

S29 Do not empty into drains.

**Contains:**

Ethanol and isopropanol

**2.3 Other hazards**

Other hazards are not known.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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<b>3.2</b>	<b>Mixtures</b>				
	<b>Hazardous components</b>				
	<b>CAS number</b>	<b>EINECS</b>	<b>Chemical name of the substance</b>	<b>Concentration</b>	<b>Classification</b>
	64-17-5	200-578-6	Ethanol	50 - 75 %	F; R11
	67-63-0	200-661-7	Isopropanol	10 - 25 %	F, Xi; R11-36-67
	78-10-4	201-083-8	Ethyl silicate	5 - 10 %	Xn; R10-20-36/37

- 3.3 Other information**  
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**  
Irritating to eyes. 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.

**6. ACCIDENTAL RELEASE MEASURES**

- 6.1 Personal precautions, protective equipment and emergency procedures**  
Exclude sources of ignition and ventilate the area. Avoid breathing vapours. Refer to protective measures listed in sections 7 and 8.
- 6.2 Environmental precautions**  
Do not allow to enter drains or water courses.

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- 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 container for disposal according to local regulations. Clean preferably with a detergent; avoid the use of solvents.
- 6.4 Reference to other sections**  
See also Section 13 for waste disposal instructions.

**7. HANDLING AND STORAGE**

- 7.1 Precautions for safe handling**  
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.
- 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. 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**
- |                      |                |                  |
|----------------------|----------------|------------------|
| Ethanol (TLV)        | 1000 ppm (8 h) |                  |
| Isopropanol (TLV)    | 200 ppm (8 h)  | 400 ppm (15 min) |
| Ethyl silicate (TLV) | 10 ppm (8 h)   |                  |
- 8.1.2 Other information on limit values**  
TLV = Threshold Limit Values according to ACGIH 2009 (American Conference of Governmental Industrial Hygienists)
- 8.2 Exposure controls**
- 8.2.1 Appropriate engineering controls**  
Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.
- 8.2.2 Individual protection measures**
- 8.2.2.1 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 A/P3. During continuous and long-term work the use of motor-driven or air-fed respirators is recommended.
- 8.2.2.2 Hand protection**

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Always wear protective gloves.

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 and if there is any sign of damage to the glove material. 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),

butyl 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**

Coloured, viscous liquid, strong odour.

**9.1.6 Initial boiling point and boiling range** 78 °C \*)

**9.1.7 Flash point** 13 °C \*)

**9.1.10 Explosive properties**

**9.1.10.1 Lower explosion limit** 3,3 vol-% \*)

**9.1.10.2 Upper explosion limit** 19,0 vol-% \*)

**9.1.11 Vapour pressure** 5,8 kPa (20 °C) \*)

**9.1.13 Relative density** 0,92

**9.1.14 Solubility(ies)**

**9.1.14.1 Water solubility** Insoluble

**9.2 Other information**

Evaporation rate (BuAc=1) : 1,6 \*)

\*) = Ethanol

**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 in order to avoid exothermic reactions.

**10.6 Hazardous decomposition products**

Hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen etc. may produce when exposed to high temperatures.

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**11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects**

There are no toxicological test data available on the product itself.

**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. Splashed in the eyes cause eye irritation.

**Ingestion:** Ingestion may cause nausea, diarrhoea and vomiting.

**12. ECOLOGICAL INFORMATION****12.1 Toxicity****12.1.1 Aquatic toxicity**

No relevant data.

**12.2 Persistence and degradability****12.2.1 Biodegradation**

No relevant data.

**12.3 Bioaccumulative potential**

No relevant data.

**12.4 Mobility in soil**

No data available.

**12.5 Results of PBT and vPvB assessment**

No data available.

**12.6 Other adverse effects**

The product is not classified as environmentally hazardous. 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

**14.3 Transport hazard class(es)** 3

**14.4 Packing group** II

**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.

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- 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.                                  |
| R11    | Highly flammable.                           |
| R20    | Harmful by inhalation.                      |
| R36    | Irritating to eyes.                         |
| R36/37 | Irritating to eyes and respiratory system.  |
| 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.  
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**Signature**

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