



EC safety data sheet

Trade name: HARDENER GLH

Status: 01.04.01

Product no.: 3519xx004

Version : 1 / GB

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1.) Identification of the substance/preparation and company

Product details

Trade name

HARDENER GLH

Identification of the manufacturer / supplier

Address

Marabuwerke GmbH & Co. KG

Asperger Straße 4

D-71732 Tamm, Germany

Telephone no. +49 7141/691-0

Fax no. +49 7141/691-235

Information provided by / telephone

product safety/+49 7141/691-116 or 232

Emergency telephone number

product safety/+49 7141/691-116 or 232

2.) Composition / information on ingredients

Chemical characterization

Aliphatic amines and amino silanes in solvents

Hazardous ingredients

3-(2-AMINOETHYLAMINO)PROPYLTRIMETHOXYSILANE

CAS no. 1760-24-3

Concentration >= 70 < 75 %-b.w.

Hazard symbols Xi R phrases 41, 43

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.

CAS no. 64742-95-6

Concentration >= 25 < 30 %-b.w.

Hazard symbols N, Xn R phrases 51/53, 66, 67, 65, 10, 37

3.) Hazards possibilities

Hazard symbols

Xn Harmful

R phrases

10 Flammable.
37 Irritating to respiratory system.
41 Risk of serious damage to eyes.
43 May cause sensitization by skin contact.
65 Harmful: may cause lung damage if swallowed.

Particular information pertaining specific risk for human / environment

The product is water polluting.

4.) First aid measures

General information

Immediately remove all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical attention. Unconsciousness: lateral position - call a physician.



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After inhalation

Take the casualty into the fresh air and keep warm. Irregular breathing/no breathing: artificial respiration. Call a physician.

After skin contact

Wash away with soap and water and rinse. Do NOT use solvents or thinners!

After eye contact

Flush with plenty of water (10 - 15 min.). Call a physician.

After ingestion

Administer medicinal charcoal (tablets or powder) in large quantities (up to 50 tablets) with water. Ensure that plenty of water is drunk in small quantities. Do not induce vomiting. Consult a doctor and specify the substance precisely.

Advice to doctor

Symptoms

The substance gives off large quantities of methanol on contact with water (which includes the gastrointestinal tract). For this reason, consider the possibility of methanol poisoning and its known latency period of several days!

5.) Firefighting measures

Suitable extinguishing media

Extinguishing powder, sand, alcohol resistant foam, carbon dioxide.

Extinguishing media that must not be used for safety reasons

Water, halones.

Special exposure hazards arising from the substance or preparation itself, its combustion products or from resulting gases

In case of fire, dangerous smoke gases such as carbon dioxide, carbon monoxide, soot, nitrogen oxides and nitrogenous gases can be produced. Therefore, take suitable precautionary measures for fire fighting. Residues remaining after a fire have to be disposed of appropriately.

Special protective equipment for firefighting

Breathing apparatus with an independent source of air may be required.

6.) Accidental release measures

Personal precautions

Keep away from sources of ignition. Provide for good ventilation. Do not breathe vapours. Refer to protective measures listed in sections 7 and 8.

Environmental precautions

Do not empty into drains. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

Methods for cleaning up/taking up

Remove by liquid absorbing material (e.g. kieselguhr) and process according to waste regulations. Clean preferably with a detergent; avoid use of solvents.

7.) Handling and storage

Handling

Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limit. Do not leave containers open. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Avoid contact with skin and eyes. Avoid inhalation of vapour and spray mist.



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When using do not eat, drink or smoke. Do not allow to come into contact with acids. Comply with the health and safety at work laws.

Advice on protection against fire and explosion

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing. No sparking tools should be used.

Classification of fires

B (Combustible liquid substances)

Ignition group

T3

Storage

Requirements for storage rooms and vessels

Recommended storage temperature: 15-20°C. Keep container tightly closed. Never use pressure to empty: container is not a pressure vessel. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Hints on storage assembly

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials.

Further information on storage conditions

Always keep in containers of same material as the original one. See also instructions on the label. Avoid heating and direct sunlight. Keep away from sources of ignition. Keep the container dry and cool. Do not store in the open air.

8.) Exposure controls / personal protection

Additional hints on technical system design.

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.

Ingredients with occupational exposure limits to be monitored

MESITYLENE

CAS no. 108-67-8
EINECS no. 203-604-4

OES/EH40

LTEL 25 ml/m³ 125 mg/m³

1,2,4-TRIMETHYLBENZENE

CAS no. 95-63-6
EINECS no. 202-436-9

OES/EH40

LTEL 25 ml/m³ 125 mg/m³

METHANOL (FORMED BY HYDROLYSIS)

CAS no. 67-56-1
EINECS no. 200-659-6

OES/EH40

LTEL 200 ml/m³ 266 mg/m³

STEL 250 ml/m³ 333 mg/m³

Skin resorption /
sensibilisation Sk



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AROMATICS

OES/EH40
LTEL 500 mg/m³

Personal protective equipment

Respiratory protection

Breathing protection equipment required in inadequately ventilated places and during spraying.

Respiratory filter (gas) : A

Respiratory filter (part): P2

Hand protection

Protective gloves, PVC or rubber.

Eye protection

Use tightly fitting safety glasses.

Skin protection

Apron. Personal should wear antistatic clothing made of natural fiber or of high temperature resistant synthetic fiber. All parts of the body should be washed after contact. Use re-greasing skin cream.

General protective and hygiene measures

When using do not eat, drink or smoke. Avoid contact with skin and eyes. Wash the hands on finishing work and before eating. Avoid inhalation of vapour. The usual precautionary measures for the handling of chemicals have to be observed.

9.) Physical and chemical properties

Appearance

Form liquid
Colour clear, colourless
Odour characteristic

Safety data

Changes in physical state

Type Boiling point:
Value 164 °C

Flash point

Value 47 °C
Method ASTM D 6450 (CCCFP)

Ignition temperature

Value 300 °C

Explosion limits

Upper explosion limit 8,0 % vol
Lower explosion limit 0,7 % vol

Vapour pressure

Value 3 hPa
Reference temperature 20 °C

Density

Value 0,97 g/cm³
Reference temperature 20 °C

Viscosity

Type Flow time
Value < 12 sec
Method DIN-cup 4 mm
Reference temperature 20 °C



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Solubility in water

Remarks partly mixable

pH value

Remarks inapplicable

Other information (chapter 9.)

The physical specifications are approximate values and refer to the used safety relevant component(s).

10.) Stability and reactivity

Conditions to avoid

Stable under recommended storage and handling conditions (See section 7).

Materials to avoid

With water reaction with build-up of methanol, heating and lowering of the flash point. With acids reacts to heat. Reacts slowly with chlorinated hydrocarbons or ketones and aldehydes.

Hazardous decomposition products

When exposed to high temperatures, dangerous decomposition products such as carbon dioxide, carbon monoxide, soot, nitrogen oxides and nitrogenous gases can be produced.

11.) Toxicological information

Experience in practice

Exposure to component solvents 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, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Solvents may cause symptoms like described above by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

Possibility of sensitization through skin contact.

Risk of serious damage to eyes. May cause lasting damage if the eyes are not rinsed immediately.

The product may release methanol in the gastro-intestinal tract. According to published evidence, methanol is capable of drying the skin, irritating the mucous membranes or producing a narcotic effect inducing a state of coma or resulting in death. After a prolonged delay, damage may be caused to the heart, kidneys, liver and optic nerves (loss of sight).

Other information (chapter 11.)

There are no data available on the preparation itself.

The product was classified in toxicological terms on the basis of the results of the calculation procedure outlined within General Directive on Preparations (88/379/EEC).

12.) Ecological information

General information / ecology

There are no data available on the preparation itself.

Do not empty into waters or drains

13.) Disposal considerations

Product

Dispose of or incinerate in accordance with corresponding regulations.

Code of waste pursuant to European Council Directive on waste: 080302 (Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesive, sealants and printing inks - wastes from MFSU of printing inks - waste ink free of halogenated solvents).



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Uncleaned packaging

Dispose of only completely emptied containers!

Code of waste pursuant on European Council Directive on waste: 150104 (Packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified - packaging - metallic).

14.) Transport information

Land transport ADR/RID

Class	3	31	c
Hazard id. no.	30		
Label	3		
UN number	1263		
Technical name	Paint related material		

Marine transport IMDG/GGVSee

Class	3.3
Packaging group	III
UN number	1263
Proper shipping name	Paint related material
EmS	3-05
MFAG	310
MARPOL	MP
Label	3

Air transport ICAO/IATA

Class	3
Packaging group	III
UN number	1263
Proper shipping name	Paint related material
Label	3

15.) Regulatory information

Hazard symbols

Xn Harmful

Hazardous component(s) to be indicated on label

3-(2-AMINOETHYLAMINO)PROPYLTRIMETHOXYSILANE

R phrases

10	Flammable.
37	Irritating to respiratory system.
41	Risk of serious damage to eyes.
43	May cause sensitization by skin contact.
65	Harmful: may cause lung damage if swallowed.

S phrases

20/21	When using do not eat, drink or smoke.
24	Avoid contact with skin.
26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
29	Do not empty into drains.
51	Use only in well-ventilated areas.
62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.



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16.) Other information

Other information

According to their chemical structure, the applied raw materials do not contain any antimony, arsenic, soluble barium, lead, cadmium, chromium, mercury and selenium.

Department issuing safety data sheet

Laboratory/product safety.

Contact person

Dipl.-Chem. G. Heller or Dipl.-Ing. U. Voetter.

The instructions are based on today's information and knowledge. The safety data sheet describes products in relation to safety requirements. These instructions do not assure application technological properties of the product.

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