

Safety data sheet

According to 91/155 EEC

Printing date 22.11.2010

Version number 19

Revision: 22.11.2010






1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** H2 Hardener
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Hardening agent/ Curing agent
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Forbo Siegling Pty. Ltd
Factory 1, 124-126 Rodeo Drive
Dandenong South
Victoria 3175. Australia
Ph.: 1300137933
Fax: 1300137944
- **Information department:**
Chemical Laboratory
Email: Claudius.Hayduk@forbo.com
- **Emergency telephone number:**
(001) 352 323 3500 (Transport hazardous materials)
++49 (0) 511-6704-214

2 Composition/information on ingredients

- **Description:** Mixture of the substances listed below with nonhazardous additions.


- **Dangerous components:**

CAS: 141-78-6 EINECS: 205-500-4	ethyl acetate	 Xi R36;  F R11 R66-67	70-90%
CAS: 4151-51-3 EINECS: 223-989-1	Tris(p-isocyanatophenyl)thiophosphat	 Xn R42	25-50%
CAS: 108-90-7 EINECS: 203-628-5	chlorobenzene	 Xn R20;  N R51/53 R10	< 2.5%


- **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification


- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

 Xi; Irritant

R36: Irritating to eyes.

 Xn; Sensitising

R42: May cause sensitisation by inhalation.

 F; Highly flammable

R11: Highly flammable.

R66-67: Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

Has a narcotizing effect.

- **Classification system:**

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

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- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

- **Code letter and hazard designation of product:**



Xn Harmful
F Highly flammable

- **Hazard-determining components of labelling:**

Tris(p-isocyanatophenyl)thiophosphat

- **Risk phrases:**

11 Highly flammable.
36 Irritating to eyes.
42 May cause sensitisation by inhalation.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

- **Safety phrases:**

9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe fumes.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
60 This material and its container must be disposed of as hazardous waste.

- **Information pertaining to particular dangers for man and environment**

- **Safety phrases:**

9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe fumes.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
60 This material and its container must be disposed of as hazardous waste.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

4 First aid measures

- **Description of first aid measures**

- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** If symptoms persist consult doctor.
- **Information for doctor** MSDB

5 Firefighting measures

- **Extinguishing media**

- **Suitable extinguishing agents**

Alcohol resistant foam



CO₂, sand, extinguishing powder. Do not use water.

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- **For safety reasons unsuitable extinguishing agents**
Water.
Water with full jet.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**



Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:**
Prevent seepage into sewage system, workpits and cellars.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**



Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls/personal protection

1500 (.Ethylacetat) mg/m³

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

141-78-6 ethyl acetate

NES (Australia)	Short-term value: 1440 mg/m ³ , 400 ppm Long-term value: 720 mg/m ³ , 200 ppm
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- **Additional information:** The lists that were valid during the creation were used as basis.

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- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Do not inhale gases / fumes / aerosols.
 Avoid contact with the eyes.
 Avoid contact with the eyes and skin.

- **Breathing equipment:**



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

Natural rubber, NR
 Fluorocarbon rubber (Viton)
 Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	According to product specification
Odour:	Odourless
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range:	Melting point > 120 °C
Boiling point/Boiling range:	77 °C

- **Flash point:** -4 °C

- **Ignition temperature:** 460 °C

- **Decomposition temperature:** Not determined.

- **Self igniting** Not determined.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

Lower:	2.1 Vol %
Upper:	11.5 Vol %

- **Vapour pressure at 20 °C:** 100 hPa

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· Density at 20°C:	1 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
dynamic at 20°C:	3 mPas
kinematic at 20°C:	3 s (DIN 53211/4)
· Solvent content:	
Organic solvents:	71.6 %
Solids content:	27.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through inhalation.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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· **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- Waste treatment methods
- Recommendation



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Waste disposal key: 080409

- **European waste catalogue**

08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances
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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- Land transport ADR/RID (cross-border)



- ADR/RID class: 3 Flammable liquids.
- Danger code (Kemler): 33
- UN-Number: 1173
- Packaging group: II
- Label: 3
- UN proper shipping name: 1173 ETHYL ACETATE
- Tunnel restriction code: D/E

- Maritime transport IMDG:



- IMDG Class: 3
- UN Number: 1173
- Label: 3
- Packaging group: II
- EMS Number: F-E,S-D
- Marine pollutant: No
- Proper shipping name: ETHYL ACETATE

- Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 3
- UN/ID Number: 1173
- Label: 3
- Packaging group: II
- Proper shipping name: ETHYL ACETATE

- **Special precautions for user** Warning: Flammable liquids.

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- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture

- Australian Inventory of Chemical Substances

All ingredients are listed.

- Standard for the Uniform Scheduling of Drugs and Poisons

None of the ingredients is listed.

- Markings according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

- Code letter and hazard designation of product:



Xn Harmful
F Highly flammable

- Hazard-determining components of labelling:

Tris(p-isocyanatophenyl)thiophosphat

- Risk phrases:

- 11 Highly flammable.
- 36 Irritating to eyes.
- 42 May cause sensitisation by inhalation.
- 66 Repeated exposure may cause skin dryness or cracking.
- 67 Vapours may cause drowsiness and dizziness.

- Safety phrases:

- 9 Keep container in a well-ventilated place.
- 16 Keep away from sources of ignition - No smoking.
- 23 Do not breathe fumes.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- 60 This material and its container must be disposed of as hazardous waste.

- National regulations

- Technical instructions (air):

Class	Share in %
NK	72.5

- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases

- R10 Flammable.
- R11 Highly flammable.
- R20 Harmful by inhalation.
- R36 Irritating to eyes.
- R42 May cause sensitisation by inhalation.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R66 Repeated exposure may cause skin dryness or cracking.
- R67 Vapours may cause drowsiness and dizziness.

- Department issuing MSDS: Chemical Laboratory

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