

Material Safety Data Sheet
According to 91/155 EEC

Printing date 19.03.2004

Reviewed on 18.11.2002







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

- Product details
- Trade name: Epifanes Poly-urethane component B (cure)
- Article number: Curing agent for Poly-urethane paints & varnishes
- Application of the substance / the preparation Reaction resin
- Manufacturer/Supplier:
W.HEEREN & ZOON BV
Postbus 166
1430 AD Aalsmeer
tel. +31-297-360366
fax. +31-297-342078
- Further information obtainable from: Department Research & Development
- Information in case of emergency: See under Manufacturer/Supplier

2 Composition/information on ingredients

- Chemical characterization
- Description:
Mixture of reactive synthetic binder, additive and organic solvents

- Dangerous components:

CAS: 108-65-6 EINECS: 203-603-9	2-methoxy-1-methylethyl acetate  Xi; R 10-36	28.834%
CAS: 1330-20-7 EINECS: 215-535-7	xylene  Xn; R 10-20/21-38	7.726%
CAS: 100-41-4 EINECS: 202-849-4	ethylbenzene  Xn,  F; R 11-20	2.033%
CAS: 822-06-0 EINECS: 212-485-8	hexamethylene-di-isocyanate  T; R 23-36/37/38-42/43	0.5%
CAS: 28182-81-2	Alifatische polyisocyanaat. Alifatic polyisocyanate  Xi; R 43	60.998%

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

3 Hazards identification

- Hazard description:



Xn Harmful

- 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.
R 10 Flammable.
R 20 Harmful by inhalation.
R 36 Irritating to eyes.
R 42 May cause sensitisation by inhalation.
R 43 May cause sensitisation by skin contact.
Contains isocyanates. See information supplied by the manufacturer
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- Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

4 First-aid measures

- General information:
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation:
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
- 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.

5 Fire-fighting measures

- Suitable extinguishing agents:
CO₂, sand, extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents:
Water
Water with full jet

6 Accidental release measures

- Person-related safety precautions:
Wear protective equipment. Keep unprotected persons away.
- Measures for environmental protection:
Do not allow to enter sewers/ surface or ground water.
- Measures for cleaning/collecting:
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

7 Handling and storage

- Handling:
- Information for safe handling:
Ensure good ventilation/exhaustion at the workplace.
- Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- Storage:
- Requirements to be met by storerooms and receptacles:
Store only in the original receptacle.
- Information about storage in one common storage facility: Not required.

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- Further information about storage conditions: None.

8 Exposure controls/personal protection

- Additional information about design of technical facilities:
No further data; see item 7.

- Ingredients with limit values that require monitoring at the

~~108-28-2~~ 2-methoxy-1-methylethyl acetate

OES	Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm IOELV, Sk
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1330-20-7 xylene

OES	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk
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100-41-4 ethylbenzene

OES	Short-term value: 552 mg/m ³ , 125 ppm Long-term value: 441 mg/m ³ , 100 ppm IOELV, Sk
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822-06-0 hexamethylene-di-isocyanate

MEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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- Additional information:
The lists valid during the making were used as basis.
- 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.
Avoid contact with the eyes and skin.
- Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- Eye protection: Safety glasses

9 Physical and chemical properties

• General Information

Form:	Fluid
Colour:	According to product specification
Odour:	Characteristic

• Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: > 145°C

• Flash point: > 38°C

• Ignition temperature: 315°C

• Self-igniting: Product is not selfigniting.

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

• Explosion limits:

Lower: 1.5 Vol %

Upper: 10.8 Vol %

• Vapour pressure at 20°C: 3.4 hPa

• Density at 20°C: 1.03 g/cm³ (ISO 2811)

• Solubility in / Miscibility with water: Insoluble.

• Viscosity:

Kinematic at 20°C: 20 s (DIN 53211/4)

• Solvent content:

Organic solvents: 38.4 %

• Solids content: 61.1 % (VB% 1h 150C)

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- Dangerous reactions No dangerous reactions known.
- Dangerous decomposition products:
No dangerous decomposition products known.

11 Toxicological information

• Acute toxicity:

• LD/LC50 values relevant for classification:

1330-20-7 xylene

Oral	LD50	4300 mg/kg (rat)
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Dermal	LD50	2000 mg/kg (rabbit)
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822-06-0 hexamethylene-di-isocyanate

Oral	LD50	738 mg/kg (rat)
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Dermal	LD50	593 mg/kg (rat)
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- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- 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

12 Ecological information

- General notes:
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

- Product:
- Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packaging:
- Recommendation:
Disposal must be made according to official regulations.

14 Transport information

- Land transport ADR/RID (cross-border)



- ADR/RID class: 3 F1 Flammable liquids.
- Danger code (Kemler): 30
- UN-Number: 1263
- Packaging group: III
- Hazard label 3
- Description of goods: 1263 PAINT (not viscous)

- Maritime transport IMDG:



- IMDG Class: 3
- UN Number: 1263
- Label 3
- Packaging group: III
- EMS Number: F-E, S-E
- Marine pollutant: No

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- Proper shipping name: PAINT
- Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 3
- UN/ID Number: 1263
- Label: 3
- Packaging group: III
- Proper shipping name: PAINT

15 Regulatory information

- 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
- Risk phrases:
 - 10 Flammable.
 - 20 Harmful by inhalation.
 - 36 Irritating to eyes.
 - 42 May cause sensitisation by inhalation.
 - 43 May cause sensitisation by skin contact.
- Safety phrases:
 - 2 Keep out of the reach of children.
 - 24/25 Avoid contact with skin and eyes.
 - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - 37 Wear suitable gloves.
 - 43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
 - 46 If swallowed, seek medical advice immediately and show this container or label.
 - 51 Use only in well-ventilated areas.
- Special labelling of certain preparations:
Contains isocyanates. See information supplied by the manufacturer
Contains Alifatische polyisocyanat.
Alifatic polyisocyanate, hexamethylene-di-isocyanate, 4-isocyanatosulphonyltoluene. May produce an allergic reaction.
- National regulations:
- Technical instructions (air):

Class	Share in %
I	0.4
II	9.8
III	28.7

- Waterhazard class:
Water hazard class 2 (Self-assessment): hazardous for water.

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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 R-phrases

- 10 Flammable.
- 11 Highly flammable.
- 20 Harmful by inhalation.
- 20/21 Harmful by inhalation and in contact with skin.
- 23 Toxic by inhalation.
- 36 Irritating to eyes.
- 36/37/38 Irritating to eyes, respiratory system and skin.
- 38 Irritating to skin.
- 42/43 May cause sensitisation by inhalation and skin contact.
- 43 May cause sensitisation by skin contact.

- Department issuing MSDS: Department Research & Development
- Contact: T.J.H.M. van Steenes