



Safety data sheet according to 1907/2006/EC, Article 31

Printing date 24.08.2018

Revision: 24.08.2018

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

- **Product identifier**
- **Trade name: Verharder (Component B) voor Aquaprotect**
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Activator
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Wasziederij "De Vesting B.V."
Trasweg 12
NL-5712 BB Someren-Eind
The Netherlands
Tel: +31 493 496760
Fax: +31 493 493670

Email: info@vesting.nl
Web: www.vesting.nl
- **Further information obtainable from:** Product safety department.
- **Emergency telephone number:** During normal opening times: +31 493 496 760

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

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Hazard pictograms


GHS05 GHS07

Signal word Danger

Hazard-determining components of labelling:

Isocyanates
 cyclohexyldimethylamine
 hexamethylene-di-isocyanate
 Polyxyethylene tridecyl ether phosphate

Hazard statements

H332 Harmful if inhaled.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe mist/vapours/spray.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Contains Isocyanates. May produce an allergic reaction.
 Restricted to professional users.

Other hazards
Results of PBT and vPvB assessment

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

3 Composition/information on ingredients

Chemical characterisation: Mixtures

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

Dangerous components:

	Isocyanates	>50-≤100%
	⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	
CAS: 9046-01-9	Polyxyethylene tridecyl ether phosphate	>2.5-≤10%
	⚠ Eye Dam. 1, H318; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315	

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CAS: 98-94-2 EINECS: 202-715-5	cyclohexyldimethylamine ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Chronic 2, H411	≤2.5%
CAS: 822-06-0 EINECS: 212-485-8	hexamethylene-di-isocyanate ⚠ Acute Tox. 1, H330; ⚠ Resp. Sens. 1, H334; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	≤2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Take affected persons into fresh air and keep quiet.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Wash with water and soap and rinse thoroughly.
Consult doctor in case of irritation.
- **After eye contact:** Rinse opened eye for several minutes under running water. Consult a doctor.
- **After swallowing:**
Rinse out mouth.
Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Foam
Fire-extinguishing powder
Carbon dioxide
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Keep people at a distance and stay on the windward side.
- **Environmental precautions:** 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).
Ensure adequate ventilation.

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- **Reference to other sections**
See Section 7 for information on safe handling.
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.
Avoid contact with skin and eyes.
Use only in well ventilated areas.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
No special requirements.
Store only in the original receptacle.
- **Information about storage in one common storage facility:** Store away from water.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Store receptacle in a well ventilated area.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

Ingredients with limit values that require monitoring at the workplace:

822-06-0 hexamethylene-di-isocyanate

WEL	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.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not carry product impregnated cleaning cloths in trouser pockets.
Keep away from foodstuffs, beverages and feed.
Do not eat, drink, smoke or sniff while working.
- **Respiratory protection:**
Use suitable respiratory protective device only when aerosol or mist is formed.
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves

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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** Nitrile rubber, NBR

· **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:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Odourless

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: 150 °C

· **Flash point:** 160 °C

· **Flammability (solid, gas):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure:** Not determined.

· **Density at 25 °C:** 1.13 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:**

Fully miscible.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

Dynamic at 25 °C: 1.400 mPas

Kinematic: Not determined.

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- | | |
|----------------------------|--|
| · Solvent content: | |
| VOC (EC) | 0.00 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Stable at environment temperature.
- **Possibility of hazardous reactions**
 - Reacts with alcohols.
 - Reacts with amines.
 - Reacts with alkali (lyes).
 - Reacts with strong oxidising agents.
 - Reacts with strong alkali.
 - Reacts with humid air.
 - Reacts with water.
 - A lot of CO₂ is formed, danger of pressure increase in closed space.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
 - Poisonous gases/vapours
 - Nitrogen oxides (NO_x)
 - Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if inhaled.

· LD/LC50 values relevant for classification:		
Isocyanates		
Oral	LD50	>2,500 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
		>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	0.39 mg/l (rat)
822-06-0 hexamethylene-di-isocyanate		
Oral	LD50	746 mg/kg (rat)
Dermal	LD50	>7,000 mg/kg (rat)
Inhalative	LC50/4 h	0.124 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.

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- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

Isocyanates	
EL50/48h	127 mg/l (daphnia magna)
LL0/96h	≥82.8 mg/l (fish (brachydanio rerio))
ErC50/0-72h	>1,000 mg/l (alga (desmodesmus subspicatus))
EC50/72 h	370 mg/l (alga (desmodesmus subspicatus))
EC50/3 h	3.828 g/l (bacteria (activated sludge))
822-06-0 hexamethylene-di-isocyanate	
EC0/48h	≥89.1 mg/l (daphnia magna)
ErC50/0-72h	>77.4 mg/l (alga (desmodesmus subspicatus))
EC50/3 h	0.842 g/l (bacteria (activated sludge))
NOEC/72 h	11.7 mg/l (alga (desmodesmus subspicatus))
LC0/96 h	≥82.8 mg/l (fish (brachydanio rerio))

- **Persistence and degradability** Based on previous experience, this product is inert and non-degradable.

- **Behaviour in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation**

After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.

- **European waste catalogue**

08 05 01*	waste isocyanates
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- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

· UN-Number · ADR, ADN, IMDG, IATA	not regulated
· UN proper shipping name · ADR, ADN, IMDG, IATA	not regulated
· Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	not regulated
· Packing group · ADR, IMDG, IATA	not regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	not regulated

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information provided in these documents are based on our current knowledge of this product and be in good faith and to the best of our knowledge. However, this information shall explicitly not as technical specification and do not constitute a guarantee of the properties. We do not accept any liability for damage or consequences of any kind or size, either express or implied, arising from the use of this data could result. Existing laws, rules and regulations by the receiver and user of the product be met on their own responsibility. They should also ensure that the product for the intended application and use.

- **Relevant phrases**
H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Product safety department.

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· Contact: Laboratory**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 1: Acute toxicity – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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