



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

Printing date 08.12.2015

Revision: 28.10.2015

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

- **Product identifier**
- **Trade name: Verharder (Component B)**
- **Article number:** 04.2C7000.00
- **CAS Number:**  
28182-81-2
- **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: [vesting@euronet.nl](mailto:vesting@euronet.nl)  
· Web: [www.vesting.nl](http://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**



GHS07

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

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

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- **Hazard pictograms**



GHS07

- **Signal word** Warning

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

Hexamethylene-1,6 diisocyanate homopolymer

- **Hazard statements**

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

- **Precautionary statements**

P280 Wear protective gloves.

P312 Call a POISON CENTER/doctor if you feel unwell.

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

- **Additional information:**

Restricted to professional users.

Keep out of the reach of children

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterisation: Substances**

- **CAS No. Description**

28182-81-2 Hexamethylene-1,6 diisocyanate homopolymer

- **Dangerous components:**

CAS: 822-06-0	hexamethylene-di-isocyanate	≤ 2,5%
EINECS: 212-485-8	☠ 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	

### 4 First aid measures

- **Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**

Immediately 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:** 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.

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- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  - Carbon dioxide
  - Foam
  - Fire-extinguishing powder
  - Water spray
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
  - In case of fire, the following can be released:
  - Carbon monoxide (CO)
  - Carbon dioxide (CO<sub>2</sub>)
  - Isocyanate vapours
  - Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
  - Hydrocyanic acid
- **Advice for firefighters**
- **Protective equipment:**
  - Do not inhale explosion gases or combustion gases.
  - Wear fully protective suit.
  - Wear self-contained respiratory protective device.
- **Additional information**
  - Collect contaminated fire fighting water separately. It must not enter the sewage system.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Wear protective equipment. Keep unprotected persons away.
  - Ensure adequate ventilation
- **Environmental precautions:**
  - Do not allow to penetrate the ground/soil.
  - Inform respective authorities in case of seepage into water course or sewage system.
  - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Pick up mechanically.
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Ensure adequate ventilation.
- **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.
  - Do not breathe vapours.
- **Information about fire - and explosion protection:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **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.
- **Further information about storage conditions:**
  - Store receptacle in fume cupboard.
  - Store in cool, dry conditions in well sealed receptacles.
- **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 <sup>3</sup> Long-term value: 0,02 mg/m <sup>3</sup> 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.
  - Use skin protection cream for skin protection.
  - Keep away from foodstuffs, beverages and feed.
  - Avoid contact with the eyes and skin.
  - Store protective clothing separately.
- **Respiratory protection:**
  - Use suitable respiratory protective device in case of insufficient ventilation.
  - 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:**



Protective gloves

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**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

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.

- **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

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· **Body protection:** Protective work clothing

### 9 Physical and chemical properties

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

#### · General Information

#### · Appearance:

· <b>Form:</b>	Viscous
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· <b>Colour:</b>	Clear
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· <b>Odour:</b>	Nearly odourless
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· <b>Odour threshold:</b>	Not determined.
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· <b>pH-value:</b>	Not determined.
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#### · Change in condition

· <b>Melting point/Melting range:</b>	-51 °C
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· <b>Boiling point/Boiling range:</b>	Undetermined.
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· <b>Flash point:</b>	228 °C
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· <b>Flammability (solid, gaseous):</b>	Not applicable.
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· <b>Ignition temperature:</b>	460 °C
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· <b>Decomposition temperature:</b>	Not determined.
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· <b>Self-igniting:</b>	Not determined.
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· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
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#### · Explosion limits:

· <b>Lower:</b>	Not determined.
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· <b>Upper:</b>	Not determined.
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· <b>Vapour pressure at 20 °C:</b>	<0,00003 hPa
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· <b>Density at 20 °C:</b>	1,17 g/cm <sup>3</sup>
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· <b>Relative density</b>	Not determined.
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· <b>Vapour density</b>	Not determined.
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· <b>Evaporation rate</b>	Not determined.
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#### · Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
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#### · Viscosity:

· <b>Dynamic at 23 °C:</b>	3000 mPas
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· <b>Kinematic:</b>	Not determined.
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#### · Solvent content:

· <b>VOC (EC)</b>	0.00 %
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· <b>Other information</b>	No further relevant information available.
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### 10 Stability and reactivity

· <b>Reactivity</b>	No further relevant information available.
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#### · Chemical stability

· <b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used according to specifications.
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· <b>Possibility of hazardous reactions</b>	No dangerous reactions known.
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· <b>Conditions to avoid</b>	No further relevant information available.
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· <b>Incompatible materials:</b>	No further relevant information available.
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- **Hazardous decomposition products:**  
Carbon monoxide and carbon dioxide  
Nitrogen oxides (NOx)

### 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity**  
Harmful if inhaled.

- **LD/LC50 values relevant for classification:**

**28182-81-2 Hexamethylene-1,6 diisocyanate homopolymer**

Oral	LD50	>2500 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat) >2000 mg/kg (rabbit)
Inhalative	LC50/4 h	0.39 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **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.
- **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:**

**28182-81-2 Hexamethylene-1,6 diisocyanate homopolymer**

EC50/3 h	3.828 g/l (bacteria (activated sludge))
EC50/48 h	>100 mg/l (daphnia magna)
LC50/96 h	>100 mg/l (fish (brachydanio rerio))

- **Persistence and degradability** Not easily biodegradable
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** Non significant accumulation in organisms
- **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.

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### 13 Disposal considerations

- **Waste treatment methods**
- **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

- |   |                 |
|---|-----------------|
| · <b>UN-Number</b>  |                 |
| · <b>ADR, ADN, IMDG, IATA</b>   | not regulated   |
| · <b>UN proper shipping name</b>  |                 |
| · <b>ADR, ADN, IMDG, IATA</b>   | not regulated   |
| · <b>Transport hazard class(es)</b>   |                 |
| · <b>ADR, ADN, IMDG, IATA</b>   |                 |
| · <b>Class</b>  | not regulated   |
| · <b>Packing group</b>  |                 |
| · <b>ADR, IMDG, IATA</b>  | not regulated   |
| · <b>Environmental hazards:</b>   |                 |
| · <b>Marine pollutant:</b>  | No              |
| · <b>Special precautions for user</b>                                       | Not applicable. |
| · <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>   | 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** Substance is not listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has 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**  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H330 Fatal if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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H335 May cause respiratory irritation.

· **Department issuing MSDS:** Product safety department.· **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

Acute Tox. 4: Acute toxicity, Hazard Category 4

Acute Tox. 1: Acute toxicity, Hazard Category 1

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· **\* Data compared to the previous version altered.**

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