



SAFETY DATA SHEET of: MegaGrip H, hardener

Revision date: Friday, June 1, 2018

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

1.1 Product identifier:

MegaGrip H, hardener

1.2 Relevant identified uses of the substance or mixture and uses advised against:

/

Concentration in use: /

1.3 Details of the supplier of the safety data sheet:

PROKOL

Duizeldonksestraat 44

NL5705CA HELMOND (NEDERLAND)

Phone: 0031492547665 — Fax: 0031492547592

E-mail: jw.koolen@prokol.nl — Website: <http://www.prokol.nl/>

1.4 Emergency telephone number:

+313 02 74 88 88

2 SECTION 2: Hazards identification:

2.1 Classification of the substance or mixture:

Classification of the substance or mixture in accordance with regulation (EU) 1272/2008:

**EUH208 H315 Skin Irrit. 2 H317 Skin Sens. 1 H319 Eye Irrit. 2 H332 Acute tox. 4 H334 Resp. Sens. 1
H335i STOT SE 3 H351 Carc. 2 H373i STOT RE 2**

2.2 Label elements:

Pictograms:



Signal word:

Danger

Hazard statements:

| | |
|----------------------------|---|
| EUH208: | Contains (4,4-Methylenediphenyl diisocyanate; Reaction mass of 4,4-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate; 1,1'-Methylenediphenyl diisocyanate, prepolymer; 4,4-Methylenediphenyl diisocyanate, oligomers). May produce an allergic reaction. |
| H315 Skin Irrit. 2: | Causes skin irritation. |
| H317 Skin Sens. 1: | May cause an allergic skin reaction. |
| H319 Eye Irrit. 2: | Causes serious eye irritation. |
| H332 Acute tox. 4: | Harmful if inhaled. |
| H334 Resp. Sens. 1: | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335i STOT SE 3: | May cause respiratory irritation. |
| H351 Carc. 2: | Suspected of causing cancer. |
| H373i STOT RE 2: | May cause damage to organs through prolonged or repeated exposure. |

Precautionary statements:

| | |
|------------------------|--|
| P261: | Avoid breathing dust/vapours/spray. |
| P280: | Wear protective gloves, protective clothing, eye protection, face protection. |
| 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. |
| P342+P311: | If experiencing respiratory symptoms: Call a POISON CENTRE or doctor. |
| P362+P364: | Take off contaminated clothing and wash it before reuse. |

Contains:

1,1'-Methylenediphenyl diisocyanate, prepolymer

2.3 Other hazards:

none

3 SECTION 3: Composition/information on ingredients:

| | | |
|---|-------|--|
| 1,1'-Methylenediphenyl diisocyanate, prepolymer | > 30% | CAS number: 39420-98-9 EINECS: REACH Registration number: CLP Classification: H315 Skin Irrit. 2 H317 Skin Sens. 1 H319 Eye Irrit. 2 H332 Acute tox. 4 H334 Resp. Sens. 1 H335i STOT SE 3 H351 Carc. 2 H373i STOT RE 2 |
|---|-------|--|

| | | |
|---|-----------|---|
| 4,4-Methylenediphenyl diisocyanate | 15% - 30% | CAS number: 101-68-8 EINECS: 202-966-0 REACH Registration number: 01-2119457014-47 CLP Classification: H315 Skin Irrit. 2 H317 Skin Sens. 1 H319 Eye Irrit. 2 H332 Acute tox. 4 H334 Resp. Sens. 1 H335i STOT SE 3 H351 Carc. 2 H373i STOT RE 2 |
| 4,4-Methylenediphenyl diisocyanate, oligomers | 5% - 15% | CAS number: 25686-28-6 EINECS: 500-040-3 REACH Registration number: 01-2119457013-49 CLP Classification: H315 Skin Irrit. 2 H317 Skin Sens. 1 H319 Eye Irrit. 2 H332 Acute tox. 4 H334 Resp. Sens. 1 H335i STOT SE 3 H351 Carc. 2 H373i STOT RE 2 |
| Reaction mass of 4,4-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate | 5% - 15% | CAS number: EINECS: 905-806-4 REACH Registration number: 01-2119457015-45 CLP Classification: H315 Skin Irrit. 2 H317 Skin Sens. 1 H319 Eye Irrit. 2 H332 Acute tox. 4 H334 Resp. Sens. 1 H335i STOT SE 3 H351 Carc. 2 H373i STOT RE 2 |

For the full text of the H phrases mentioned in this section, see section 16.

4 SECTION 4: First aid measures:

4.1 Description of first aid measures:

Always ask medical advice as soon as possible should serious or continuous disturbances occur.

| | |
|----------------------|--|
| Skin contact: | remove contaminated clothing, rinse skin with plenty of water and immediately transport to hospital. |
| Eye contact: | first prolonged rinsing with water (contact lenses to be removed if this is easily done) then take to physician. |
| Ingestion: | rinse mouth, do not induce vomiting, take to hospital immediately. |
| Inhalation: | let sit upright, fresh air, rest and take to hospital. |

4.2 Most important symptoms and effects, both acute and delayed:

| | |
|----------------------|--|
| Skin contact: | caustic, redness, pain, serious burns |
| Eye contact: | caustic, redness, bad looking, pain |
| Ingestion: | caustic, lack of breath, vomiting, blisters on lips and tongue, burning pain in mouth and throat, gullet and stomach |
| Inhalation: | headache, dizziness, nausea, drowsiness, unconsciousness |

4.3 Indication of any immediate medical attention and special treatment needed:

none

5 SECTION 5: Fire-fighting measures:

5.1 Extinguishing media:

CO2, foam, powder, sprayed water

5.2 Special hazards arising from the substance or mixture:

none

5.3 Advice for firefighters:

Extinguishing agents to be avoided: none

6 SECTION 6: Accidental release measures:

6.1 Personal precautions, protective equipment and emergency procedures:

Do not walk into or touch spilled substances and avoid inhalation of fumes, smoke, dusts and vapours by staying up wind. Remove any contaminated clothing and used contaminated protective equipment and dispose of it safely.

6.2 Environmental precautions:

do not allow to flow into sewers or open water.

6.3 Methods and material for containment and cleaning up:

Contain released substance, store into suitable containers. If possible remove by using absorbent material.

6.4 Reference to other sections:

for further information check sections 8 & 13.

7 SECTION 7: Handling and storage:

7.1 Precautions for safe handling:

handle with care to avoid spillage.

7.2 Conditions for safe storage, including any incompatibilities:

keep in a sealed container in a closed, frost-free, ventilated room.

7.3 Specific end use(s):

/





8 SECTION 8: Exposure controls/personal protection:

8.1 Control parameters:

Listing of the hazardous ingredients in section 3, of which the TLV value is known

/

8.2 Exposure controls:

| | | |
|-------------------------------|--|---|
| Inhalation protection: | if necessary, use an air-purifying face mask in case of respiratory hazards. |  |
| Skin protection: | handling with Viton-gloves (EN 374). Breakthrough time: >480' Material thickness: 0,7 mm. Thoroughly check gloves before use. Take of the gloves properly without touching the outside with your bare hands. The manufacturer of the protective gloves has to be consulted about the suitability for a specific work station. Wash and dry your hands. |  |
| Eye protection: | keep an eye-rinse bottle within reach. Tight-fitting safety goggles. Wear a face shield and protective suit in case of exceptional processing problems. |  |
| Other protection: | impermeable clothing. The type of protective equipment depends on the concentration and amount of hazardous substances at the work station in question. |  |

9 SECTION 9: Physical and chemical properties:

9.1 Information on basic physical and chemical properties:

| | |
|--|------------------------|
| Melting point/melting range: | / |
| Boiling point/Boiling range: | / |
| pH: | / |
| pH 1% diluted in water: | / |
| Vapour pressure/20°C,: | / |
| Vapour density: | not applicable |
| Relative density, 20°C: | 1.1100 kg/l |
| Appearance/20°C: | liquid |
| Flash point: | 175 °C |
| Flammability (solid, gas): | not applicable |
| Auto-ignition temperature: | / |
| Upper flammability or explosive limit, (Vol %): | / |
| Lower flammability or explosive limit, (Vol %): | / |
| Explosive properties: | not applicable |
| Oxidising properties: | not applicable |
| Decomposition temperature: | / |
| Solubility in water: | not soluble |
| Partition coefficient: n-octanol/water: | not applicable |
| Odour: | characteristic |
| Odour threshold: | not applicable |
| Dynamic viscosity, 20°C: | 900 mPa.s |
| Kinematic viscosity, 40°C: | 811 mm ² /s |
| Evaporation rate (n-BuAc = 1): | / |

9.2 Other information:

| | |
|--|-----------|
| Volatile organic component (VOC): | / |
| Volatile organic component (VOC): | 0.000 g/l |

Sustained combustion test : /

10 SECTION 10: Stability and reactivity:

10.1 Reactivity:

stable under normal conditions.

10.2 Chemical stability:

extremely high or low temperatures.

10.3 Possibility of hazardous reactions:

none

10.4 Conditions to avoid:

protect from sunlight and do not expose to temperatures exceeding + 50°C.

10.5 Incompatible materials:

alkalines, water, acids, organic matter, oxidants, reductants

10.6 Hazardous decomposition products:

doesn't decompose with normal use

11 SECTION 11: Toxicological information:

11.1 Information on toxicological effects:

| | |
|----------------------------|--|
| H315 Skin Irrit. 2: | Causes skin irritation. |
| H317 Skin Sens. 1: | May cause an allergic skin reaction. |
| H319 Eye Irrit. 2: | Causes serious eye irritation. |
| H332 Acute tox. 4: | Harmful if inhaled. |
| H334 Resp. Sens. 1: | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335i STOT SE 3: | May cause respiratory irritation. |
| H351 Carc. 2: | Suspected of causing cancer. |
| H373i STOT RE 2: | May cause damage to organs through prolonged or repeated exposure. |

Calculated acute toxicity, ATE oral: /

Calculated acute toxicity, ATE dermal: /

| | |
|---|---|
| 1,1'-Methylenediphenyl diisocyanate, prepolymer | LD50 oral, rat: ≥ 5,000 mg/kg LD50 dermal, rabbit: ≥ 5,000 mg/kg LC50, Inhalation, rat, 4h: 11 mg/l |
| 4,4-Methylenediphenyl diisocyanate | LD50 oral, rat: ≥ 5,000 mg/kg LD50 dermal, rabbit: ≥ 5,000 mg/kg LC50, Inhalation, rat, 4h: 11 mg/l |

| | |
|---|---|
| 4,4-Methylenediphenyl diisocyanate, oligomers | LD50 oral, rat: ≥ 5,000 mg/kg LD50 dermal, rabbit: ≥ 5,000 mg/kg LC50, Inhalation, rat, 4h: 11 mg/l |
| Reaction mass of 4,4-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate | LD50 oral, rat: ≥ 5,000 mg/kg LD50 dermal, rabbit: ≥ 5,000 mg/kg LC50, Inhalation, rat, 4h: 11 mg/l |

12 SECTION 12: Ecological information:

12.1 Toxicity:

| | |
|---|---|
| 4,4-Methylenediphenyl diisocyanate, oligomers | EC50 (Daphnia): 129.7 mg/L (24h) EC50 (Algae): > 1640 mg/L (3d) EC50 (soil microorganisms): > 100 mg/L (3h) |
| Reaction mass of 4,4-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate | EC50 (Daphnia): 129.7 mg/L (24h) EC50 (Algae): > 1640 mg/L (3d) EC50 (soil microorganisms): > 100 mg/L (3h) |

12.2 Persistence and degradability:

No additional data available

12.3 Bioaccumulative potential:

No additional data available

12.4 Mobility in soil:

Water hazard class, WGK (AwSV): 1
Solubility in water: not soluble

12.5 Results of PBT and vPvB assessment:

No additional data available

12.6 Other adverse effects:

No additional data available

13 SECTION 13: Disposal considerations:

13.1 Waste treatment methods:

Draining into the sewers is not permitted. Removal should be carried out by licensed services. Possible restrictive regulations by local authority should always be adhered to.

14 SECTION 14: Transport information:

14.1 UN number:

not applicable

14.2 UN proper shipping name:

ADR, IMDG, ICAO/IATA not applicable

14.3 Transport hazard class(es):

Class(es): not applicable

Identification number of the hazard: not applicable

14.4 Packing group:

not applicable

14.5 Environmental hazards:

not dangerous to the environment

14.6 Special precautions for user:

Hazard characteristics: not applicable

Additional guidance: not applicable

15 SECTION 15: Regulatory information:

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

Water hazard class, WGK (AwSV): 1
Volatile organic component (VOC): /
Volatile organic component (VOC): 0.000 g/l
Composition by regulation (EC) 648/2004: none

15.2 Chemical Safety Assessment:

No data available

16 SECTION 16: Other information:

Legend to abbreviations used in the safety data sheet:

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

BCF: Bioconcentration factor

CAS: Chemical Abstracts Service

CLP: Classification, Labelling and Packaging of chemicals

EINECS: European INventory of Existing Commercial chemical Substances

Nr.: number

PTB: persistent, toxic, bioaccumulative

TLV: Threshold Limit Value

vPvB: very persistent and very bioaccumulative substances

WGK: Water hazard class

WGK 1: slightly hazardous for water

WGK 2: hazardous for water

WGK 3: extremely hazardous for water

Legend to the H Phrases used in the safety data sheet:

EUH208: Contains (4,4-Methylenediphenyl diisocyanate; Reaction mass of 4,4-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate; 1,1'-Methylenediphenyl diisocyanate, prepolymer; 4,4-Methylenediphenyl diisocyanate, oligomers). May produce an allergic reaction. **H315 Skin Irrit. 2:** Causes skin irritation. **H317 Skin Sens. 1:** May cause an allergic skin reaction. **H319 Eye Irrit. 2:** Causes serious eye irritation. **H332 Acute tox. 4:** Harmful if inhaled. **H334 Resp. Sens. 1:** May cause allergy or asthma symptoms or breathing difficulties if inhaled. **H335i STOT SE 3:** May cause respiratory irritation. **H351 Carc. 2:** Suspected of causing cancer. **H373i STOT RE 2:** May cause damage to organs through prolonged or repeated exposure.

CLP Calculation method:

Calculation method

Reason of revision, changes of following items:

Section: 9.2

MSDS reference number:

ECM-105980,00

This safety information sheet has been compiled in accordance with annex II/A of the regulation (EU) No 2015/830. Classification has been calculated in accordance with European regulation 1272/2008 with their respective amendments. It has been compiled with the utmost care. We cannot, however, accept responsibility for damage, of any kind, that may be caused by using these data or the product concerned. To use this preparation for an experiment or a new application, the user must carry out a material suitability and safety study himself.