



## SAFETY DATA SHEET of: MonoSeal Hardener

Revision date: Monday, February 3, 2020

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

#### 1.1 Product identifier:

MonoSeal 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](mailto:jw.koolen@prokol.nl) — Website: <http://www.prokol.nl/>

#### 1.4 Emergency telephone number:

+32 70 245 245

### 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 H411 Aquatic Chronic 2**

#### 2.2 Label elements:

Pictograms:



Signal word:

none

Hazard statements:

**EUH208:** Contains ( N-Formylmorpholin ). May produce an allergic reaction.

**H411 Aquatic Chronic 2:** Toxic to aquatic life with long lasting effects.

Precautionary statements:

**P273:** Avoid release to the environment.

**P391:** Collect spillage.

**P501:** Dispose of contents/container in accordance with local/regional/national/international regulations.

Contains:

none

2.3 Other hazards:

none

### 3 SECTION 3: Composition/information on ingredients:

Barium sulphate	≤ 30 %	CAS number: 7727-43-7 EINECS: 231-784-4 REACH Registration number: Annex V CLP Classification:
Hydrocarbons, C10-C12, isoalkanes	≤ 5 %	CAS number: EINECS: 923-037-2 REACH Registration number: 01-2119471991-29 CLP Classification: <b>EUH066</b> <b>H226 Flam. Liq. 3</b> <b>H304 Asp. Tox. 1</b> <b>H411 Aquatic Chronic 2</b>
2,6-dimethyl-4-Heptanone	≤ 3 %	CAS number: 108-83-8 EINECS: 203-620-1 REACH Registration number: 01-2119474441-41 CLP Classification: <b>H226 Flam. Liq. 3</b> <b>H335 STOT SE 3</b>
2,4-diamino-3,5-diethyltoluene	≤ 3 %	CAS number: 68479-98-1 EINECS: 270-877-4 REACH Registration number: 01-2119486805-25 CLP Classification: <b>H302 Acute tox. 4</b> <b>H312 Acute tox. 4</b> <b>H319 Eye Irrit. 2</b> <b>H373 STOT RE 2</b> <b>H400 Aquatic Acute 1</b> <b>H410 Aquatic Chronic 1</b>

Naphta heavy (high boiling point hydrogen treated)	≤ 0.8 %	CAS number: 64742-82-1 EINECS: 265-185-4 REACH Registration number: CLP Classification: <b>EUH066 H226 Flam. Liq. 3 H304 Asp. Tox. 1 H336 STOT SE 3 H411 Aquatic Chronic 2</b>
1,2-ethanediamine, polymer with aziridine, reaction product with 2-propenoic acid, 2-ethylhexyl ester, salt with oxirane	≤ 0.5 %	CAS number: 398475-96-2 EINECS: REACH Registration number: CLP Classification: <b>H315 Skin Irrit. 2 H319 Eye Irrit. 2 H400 Aquatic Acute 1 H410 Aquatic Chronic 1</b>
N-Formylmorpholin	≤ 0.3 %	CAS number: 4394-85-8 EINECS: 224-518-3 REACH Registration number: 01-2119987993-12 CLP Classification: <b>H317 Skin Sens. 1B</b>

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.

<b>Skin contact:</b>	remove contaminated clothing, rinse with plenty of water, if necessary seek medical attention.
<b>Eye contact:</b>	first prolonged rinsing with water (contact lenses to be removed if this is easily done) then take to physician.
<b>Ingestion:</b>	rinse mouth, do not induce vomiting, take to hospital immediately.
<b>Inhalation:</b>	let sit upright, fresh air, rest and take to hospital.

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

<b>Skin contact:</b>	none
<b>Eye contact:</b>	redness
<b>Ingestion:</b>	diarrhoea, headache, abdominal cramps, sleepiness, vomiting
<b>Inhalation:</b>	none

### 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

Hydrocarbons, C10-C12, isoalkanes 1,200 mg/m<sup>3</sup>, Barium sulphate 5 mg/m<sup>3</sup>

### 8.2 Exposure controls:

<b>Inhalation protection:</b>	respiratory protection is not required. Use ABEK type gas masks in case of irritating exposure. If necessary, use with sufficient exhaust ventilation.	
<b>Skin protection:</b>	handling with nitril-gloves (EN 374). Breakthrough time: >480'. Material thickness: 0,35 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.	

<b>Eye protection:</b>	keep an eye-rinse bottle within reach. Tight-fitting safety goggles. Wear a face shield and protective suit in case of exceptional processing problems.	
<b>Other protection:</b>	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:

<b>Melting point/melting range:</b>	/
<b>Boiling point/Boiling range:</b>	100 °C — 441 °C
<b>pH:</b>	/
<b>pH 1% diluted in water:</b>	/
<b>Vapour pressure/20°C,:</b>	200 Pa
<b>Vapour density:</b>	not applicable
<b>Relative density, 20°C:</b>	1.8185 kg/l
<b>Appearance/20°C:</b>	liquid
<b>Flash point:</b>	/
<b>Flammability (solid, gas):</b>	not applicable
<b>Auto-ignition temperature:</b>	200 °C
<b>Upper flammability or explosive limit, (Vol %):</b>	7.000 %
<b>Lower flammability or explosive limit, (Vol %):</b>	0.600 %
<b>Explosive properties:</b>	not applicable
<b>Oxidising properties:</b>	not applicable
<b>Decomposition temperature:</b>	/
<b>Solubility in water:</b>	not soluble
<b>Partition coefficient: n-octanol/water:</b>	not applicable
<b>Odour:</b>	characteristic
<b>Odour threshold:</b>	not applicable
<b>Dynamic viscosity, 20°C:</b>	920 mPa.s
<b>Kinematic viscosity, 40°C:</b>	506 mm <sup>2</sup> /s
<b>Evaporation rate (n-BuAc = 1):</b>	0.300

### 9.2 Other information:

<b>Volatile organic component (VOC):</b>	5.20 %
<b>Volatile organic component (VOC):</b>	80.560 g/l
<b>Sustained combustion test :</b>	/

## 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:

acids, alkalines, oxidants, reductants

### 10.6 Hazardous decomposition products:

doesn't decompose with normal use

## 11 SECTION 11: Toxicological information:

### 11.1 Information on toxicological effects:

About the preparation itself: No additional data available

**Calculated acute toxicity, ATE oral:** /

**Calculated acute toxicity, ATE dermal:** /

Barium sulphate	LD50 oral, rat: ≥ 5 000 mg/kg LD50 dermal, rabbit: ≥ 5 000 mg/kg LC50, Inhalation, rat, 4h: ≥ 50 mg/l
Hydrocarbons, C10-C12, isoalkanes	LD50 oral, rat: 2 000 mg/kg LD50 dermal, rabbit: ≥ 5 000 mg/kg LC50, Inhalation, rat, 4h: ≥ 50 mg/l
2,6-dimethyl-4-Heptanone	LD50 oral, rat: ≥ 5 000 mg/kg LD50 dermal, rabbit: ≥ 5 000 mg/kg LC50, Inhalation, rat, 4h: ≥ 50 mg/l
2,4-diamino-3,5-diethyltoluene	LD50 oral, rat: 738 mg/kg LD50 dermal, rabbit: 1 100 mg/kg LC50, Inhalation, rat, 4h: ≥ 50 mg/l
Naphta heavy (high boiling point hydrogen treated)	LD50 oral, rat: ≥ 5 000 mg/kg LD50 dermal, rabbit: ≥ 5 000 mg/kg LC50, Inhalation, rat, 4h: ≥ 50 mg/l
1,2-ethanediamine, polymer with aziridine, reaction product with 2-propenoic acid, 2-ethylhexyl ester, salt with oxirane	LD50 oral, rat: ≥ 5 000 mg/kg LD50 dermal, rabbit: ≥ 5 000 mg/kg LC50, Inhalation, rat, 4h: ≥ 50 mg/l
N-Formylmorpholin	LD50 oral, rat: ≥ 5 000 mg/kg LD50 dermal, rabbit: ≥ 5 000 mg/kg LC50, Inhalation, rat, 4h: ≥ 50 mg/l

## 12 SECTION 12: Ecological information:

### 12.1 Toxicity:

2,4-diamino-3,5-diethyltoluene	LC50 (Fish): 200 mg/L (48h) EC50 (Daphnia): 0,5 mg/L (48h) EC50 (soil microorganisms): > 170 mg/L (24h)
N-Formylmorpholin	LC50 (Fish): > 500 mg/l 96h

### 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):** 2  
**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:

3082

### 14.2 UN proper shipping name:

UN 3082 Environmentally hazardous substance, liquid, n.o.s. (mixture with 2,4-diamino-3,5-diethyltoluene; Hydrocarbons, C10-C12, isoalkanes) , 9, III, (E)

### 14.3 Transport hazard class(es):

**Class(es):** 9  
**Identification number of the hazard:** 90

### 14.4 Packing group:

III

#### 14.5 Environmental hazards:

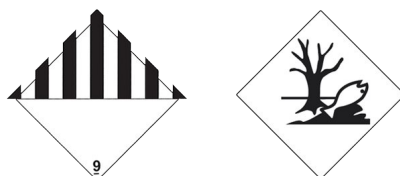
environmentally hazardous

#### 14.6 Special precautions for user:

**Hazard characteristics:**

Risk to the aquatic environment and the sewerage system.

**Additional guidance:**



## 15 SECTION 15: Regulatory information:

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

**Water hazard class, WGK (AwSV):** 2

**Volatile organic component (VOC):** 5.203 %

**Volatile organic component (VOC):** 80.560 g/l

**Composition by regulation (EC 648/2004):** Aliphatic hydrocarbons 5% - 15%, Zeolites < 5%

### 15.2 Chemical Safety Assessment:

No data available

## 16 SECTION 16: Other information:

### Legend to abbreviations used in the safety data sheet:

<b>ADR:</b>	The European Agreement concerning the International Carriage of Dangerous Goods by Road
<b>BCF:</b>	Bioconcentration factor
<b>CAS:</b>	Chemical Abstracts Service
<b>CLP:</b>	Classification, Labelling and Packaging of chemicals
<b>EINECS:</b>	European INventory of Existing Commercial chemical Substances
<b>Nr.:</b>	number
<b>PTB:</b>	persistent, toxic, bioaccumulative
<b>TLV:</b>	Threshold Limit Value
<b>vPvB:</b>	very persistent and very bioaccumulative substances
<b>WGK:</b>	Water hazard class
<b>WGK 1:</b>	slightly hazardous for water
<b>WGK 2:</b>	hazardous for water
<b>WGK 3:</b>	extremely hazardous for water

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

**EUH066:** Repeated exposure may cause skin dryness or cracking. **EUH208:** Contains ( N-Formylmorpholin ). May produce an allergic reaction. **H226 Flam. Liq. 3:** Flammable liquid and vapour. **H302 Acute tox. 4:** Harmful if swallowed. **H304 Asp. Tox. 1:** May be fatal if swallowed and enters airways. **H312 Acute tox. 4:** Harmful in



contact with skin. **H315 Skin Irrit. 2:** Causes skin irritation. **H317 Skin Sens. 1B:** May cause an allergic skin reaction. **H319 Eye Irrit. 2:** Causes serious eye irritation. **H335 STOT SE 3:** May cause respiratory irritation. **H336 STOT SE 3:** May cause drowsiness or dizziness. **H373 STOT RE 2:** May cause damage to organs through prolonged or repeated exposure. **H400 Aquatic Acute 1:** Very toxic to aquatic life. **H410 Aquatic Chronic 1:** Very toxic to aquatic life with long lasting effects. **H411 Aquatic Chronic 2:** Toxic to aquatic life with long lasting effects.

**CLP Calculation method:**

Calculation method

**Reason of revision, changes of following items:**

Sections: 2.1, 2.2, 3, 9.1, 9.2, 14.2, 15.1

**MSDS reference number:**

ECM-110832,00

*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.*