Helios Tovarna barv, lakov in umetnih smol Količevo, d o o
Količevo 65 • 1230 Domžale, Slovenija

# INSPECTION CERTIFICATE

Date 19.12.2017 Page 1 / 1

Contact:
Tel.: +386 1 7224000 Fax: +386 1 7224340
www.helios.si; kontrola@helios.si

**Material 480739 GraviHEL epoxy primer 50 grey**

| Characteristic | UOM | Specification | Method / Accor.stand. |
|---|---|---|---|
| Visual appearance | - | Conforms | MH1023 |
| Density 20°C | g/cm3 | 1,540 - 1,610 | MH1028 /EN ISO 2811 |
| Non-volatile matter | % | 74,0 - 76,0 | MH1155 /EN ISO 3251 |
| Drying 23°C: Dust dry | min | 20 - 30 | MH3107 /ASTM D1604 |
| Drying 23°C: Dry to touch | min | 60 - 120 | MH3107 /ASTM D1604 |
| Hardness König - glass | s | 70 - 90 | MH3130 /EN ISO 1522 |
| Film thickness | µm | 40 - 60 | MH3127 /EN ISO 2808 |
| Cupping test | mm | 5,0 - 7,0 | MH3135 /EN ISO 1520 |
| Adhesion | | 0 - 1 | MH3134 /EN ISO 2409 |
| Impact resistance | kg-cm | 30 - 50 | MH3138 /EN ISO 6272-1 |
| Visual colour comparison | - | Conforms | MH3100 / EN ISO 3668 |

Quality inspection
Bojana Ceglar, univ.dipl.ing.

Digitally signed by Arnaut Natalia
Date: 2022.04.09 15:13:28 EEST
Reason: MoldSign Signature
Location: Moldova

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Količevo 65 • 1230 Domžale, Slovenija

# INSPECTION CERTIFICATE

Date 07.08.2016 Page 1 / 1

Contact:
Tel.: +386 1 7224000 Fax: +386 1 7224340
www.helios.si; kontrola@helios.si

**Material** **48070603 48070605 48070613**
**GRAVIHEL PUR TOPCOAT 402 - 005 HIGH GLOSS**

| Characteristic | UOM | Specification | Method / Accor.stand. |
|---|---|---|---|
| Flow time DIN 4/20°C | s | 70 - 80 | MH1001 /DIN 53211 |
| Density 20°C | g/cm3 | 1,080 - 1,120 | MH1028 /EN ISO 2811 |
| Wet film thickness on glass | µm | 60 | PV073 |
| Drying 23°C: Dust dry | min | max 30 | MH3107 /ASTM D1604 |
| Drying 23°C: Dry to touch | min | max 120 | MH3107 /ASTM D1604 |
| Hardness König - glass | s | min 100 | MH3130 /EN ISO 1522 |
| Hardness Koenig | s | min 80 | MH3130 /EN ISO 1522 |
| Film thickness | µm | 30 - 40 | MH3127 /EN ISO 2808 |
| Cupping test | mm | 8,0 - 10,0 | MH3135 /EN ISO 1520 |
| Cross-cut test - 1mm | | 0 - 1 | MH3134 /EN ISO 2409 |
| Impact resistance | kg-cm | min 10 | MH3138 /EN ISO 6272-1 |

Quality inspection
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# SAFETY DATA SHEET according to regulation EC 1907/2006 (REACH) and its updates

GraviHEL epoxy primer 50 grey

Revision No.:3/ 1
First Revision Date: 02-07-16
Revision Date:02-07-16
Print Date:06-11-17

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

### 1.1. Product identifier

| | |
|---|---|
| Product | **GraviHEL epoxy primer 50 grey** |
| Item code(s): | 480739 |

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

| | |
|---|---|
| Use, scope: | Two-component priming coat based on an epoxy binder used for anti-corrosion protection of steel surfaces which requires a high chemical and mechanical resistance.<br>The product is intended for professional or industrial application. |
| Restrictions on use | No restrictions known. |

### 1.3. Details of the supplier of the safety data sheet

| | |
|---|---|
| Producer | HELIOS TBLUS d.o.o., obrat COLOR<br>Škofjeloška 50, 1215 Medvode, SLOVENIJA<br>T +386 1 722 40 00 F +386 1 722 43 10 |
| Responsible person | Matija Podobnik, e-mail: matija.podobnik@helios.si |

### 1.4. Emergency telephone number

| | |
|---|---|
| Phone | In case of health hazard, consult a private or a doctor on duty. For additional information please call phone number +386 (1) 722 4383 HSE dept.). |

## 2. Hazards identification

### 2.1. Classification of the substance or mixture
### Classification (EU 1272/2008)

| | |
|---|---|
| **Categories of danger** | Serious Eye Damage/Eye Irritation 1<br>Skin Sensitisation 1<br>Skin Corrosion/Irritation 2<br>Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure 2<br>Hazardous to the aquatic environment - Chronic 2<br>Flammable Liquid 3<br>Specific Target Organ Systemic Toxicity (STOT) - Single Exposure 3 |

### 2.2. Label elements
### EU 1272/2008:

| | |
|---|---|
| **Signal Word** | **Danger** |

| | |
|---|---|
| Contains: | reaction mixture of ethylbenzene, m-xylene and p-xylene; 1-butanol; reaction product: bisphenol a (epichlorohydrin); M700-1100 |
| **Hazard phrases (H-phrases):** | H226 - Flammable liquid and vapour.<br>H315 - Causes skin irritation.<br>H317 - May cause an allergic skin reaction.<br>H318 - Causes serious eye damage.<br>H335 - May cause respiratory irritation.<br>H373 - May cause damage to organs through prolonged or repeated exposure.<br>H411 - Toxic to aquatic life with long lasting effects. |
| **Precautionary statements:** | P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P273 - Avoid release to the environment. P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P314 - Get medical advice/attention if you feel unwell. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. |

### 2.3. Other hazards

| | |
|---|---|
| | Product contains organic solvents. |

## 3. Composition/information on ingredients

### 3.2. Mixtures

| Chemical Name | Concentration [weight %] | CAS<br>EINECS<br>EU INDEX<br>REACH reg.no. | Classification (REGULATION (EC) No. 1272/2008)<br>Notes |
|---|---|---|---|
| reaction product: bisphenol a (epichlorohydrin); M700-1100 | 10-19,99 | 25068-38-6<br>500-033-5<br>- | Skin Sens. 1; H317<br>Eye Irrit.2; H319<br>Skin Irrit. 2; H315 |
| reaction mixture of ethylbenzene, m-xylene and p-xylene | 10-19,99 | -<br>905-562-9<br>-<br>01-2119555267-33 | Asp.Tox.1; H304<br>STOT RE 2; H373<br>STOT SE 3; H335<br>Eye Irrit.2; H319<br>Skin Irrit. 2; H315<br>Acute Tox. 4; H332<br>Acute Tox. 4; H312<br>Flam. Liq. 3; H226 |
| trizinc bis(orthophosphate) | 5,0-9,99 | 7779-90-0<br>231-944-3<br>030-011-00-6<br>01-2119485044-40 | Aquatic Chronic 1; H410<br>Aquatic. Acute 1; H400<br>AQUATIC CHRONIC 1: M = 1<br>AQUATIC ACUTE 1: M = 1 |
| reaction mixture of ethylbenzene, m-xylene and p-xylene | 5,0-9,99 | 1330-20-7<br>215-535-7 | Asp.Tox.1; H304<br>STOT RE 2; H373 |

| | | | |
|---|---|---|---|
| | | 601-022-00-9<br>01-2119488216-32 | STOT SE 3; H335<br>Eye Irrit.2; H319<br>Skin Irrit. 2; H315<br>Acute Tox. 4; H332<br>Acute Tox. 4; H312<br>Flam. Liq. 3; H226<br>C |
| 1-butanol | 5,0-9,99 | 71-36-3<br>200-751-6<br>603-004-00-6<br>01-2119484630-38 | STOT SE 3; H336<br>STOT SE 3; H335<br>Eye Dam. 1; H318<br>Skin Irrit. 2; H315<br>Acute Tox. 4; H302<br>Flam. Liq. 3; H226 |
| zinc oxide | 0,1- 0,49 | 1314-13-2<br>215-222-5<br>030-013-00-7<br>01-2119463881-32 | Aquatic Chronic 1; H410<br>Aquatic. Acute 1; H400 |
| | | | |

| | |
|---|---|
| **Notes:** | The classification for the product was made on basis of actual content of components.The cointained substances are shown in intervals.In case of inspection check (control of classification) we are ready to send to inspection bodies on their request the actual content of individual components. |

## 4. First aid measures

### 4.1. Description of first aid measures

| | |
|---|---|
| In case of excessive inhalation: | Take victim to clean air, put it in position to rest. In the case of respiratory problems provide artificial respiration. If dizziness, headache and nausea appear, take victim to the hospital - in the lateral position and maintain clear airway pathways. |
| In case of contact with skin: | Remove contaminated clothing. Wash skin with soap and water. Do not use organic solvents or thinners. |
| In case of contact with eyes: | With clean fingers space the eyelids and direct water in the eyes (with moderate and lukewarm water jet) and rotate the eyes so that water reaches all parts of the eye. In case of eye or tearing seek medical help. |
| In case of ingestion: | Do not eat. Rinse mouth with water. Do not induce vomiting. |

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

| | |
|---|---|
| In case of excessive inhalation: | Respiratory tract irritation, coughing, burning sensation in the nasal cavity.<br>Inflammation of the upper respiratory tract, resulting in coughing, sneezing, runny nose, headache, hoarseness and pain in the nose and throat. |
| In case of contact with skin: | Slight skin irritation, which includes signs: localized redness, dryness, consequently itching is possible.<br>Skin sensitivity, manifested by redness, itching, swelling.<br>Inflammation of the skin, which can be seen as local redness, swelling, pain, itching and malaise. |
| In case of contact with eyes: | Slight inflammation of the eye, including the signs: painful burning and stinging, tearing, and may also be pain. Conjunctivitis may appear. |
| In case of ingestion: | None data known. |

### 4.3. Indication of any immediate medical attention and special treatment needed

| | |
|---|---|
| | No data available |

## 5. Firefighting measures

### 5.1. Extinguishing media

| | |
|---|---|
| Fire Extinguishing Media: | SUITABLE: Foam, powder, carbon dioxide, inert gas or INERGEN FM 200 (started phase fire fighting), water fog.<br>UNSUITABLE: Water jet, unless USED ONLY for water mist to cool containers with flammable products. Remove all possible sources of ignition: open flame, lit cigarette, sparkling of tools and equipment. Close packagings with product. |
| Unsuitable extinguishing media: | Open water jet |

### 5.2. Special hazards arising from the substance or mixture

| | |
|---|---|
| Specific methods of extinguishing fire: | Extinguish fire in wind direction. Cool down vessels with product, which do not burn with dispersed water, prevent leakage of the product and place them in a safety place. The possibility of formation man harmful gases and thick smoke during the fire. The use of protective mask with filter A is mandatory. |

### 5.3. Advice for firefighters

| | |
|---|---|
| Special equipment to protect firefighters: | Independent fire extinguisher on compressed air, a full fire-fighting equipment to protect the body. |

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

| | |
|---|---|
| Personal precautions: | Remove possible sources of ignition (flame, lit cigarette, sparkling etc.). Protect respiratory system against inhalation of vapours. Provide good ventilation. |

### 6.2. Environmental precautions

| | |
|---|---|
| Environmental precautions: | Prevent leakage into water, water dams, cellars, caves or sewage system.<br>Prevent outflow into water, water dams, cellars, caves or sewage system and vapour accumulation in closed rooms. |

### 6.3. Methods and material for containment and cleaning up

| | |
|---|---|
| Methods of cleaning up: | Absorb the outflown product and mix it with soil, sand or other absorptive materials for liquids. Leave waste to the authorized waste collectors. |

## 7. Handling and storage

### 7.1. Precautions for safe handling

| | |
|---|---|
| Personal precautions: | At the use product vapours may produce flammable/explosive mixtures of vapours and air. During the pumping static electrification may occur. Emptying of static electrification, which could cause fire. At the decanting of larger quantities assure conductivity with binding and earthing of |

| | |
|---|---|
| | complete equipment. Prevent contact with hot objects, sparkles, flame and sources of ignition. |
| Advice on safe handling: | Do not smoke, drink or eat while handling the product. Do not breathe vapors, avoid contact with skin and eyes. At work wear cotton overalls or coveralls, nitrile rubber gloves and safety glasses with side shields. |

**7.2. Conditions for safe storage, including any incompatibilities**

| | |
|---|---|
| Technical measures and conditions: | SUITABLE: Store in tightly closed vessels in a cool and ventilated room. Prevent the formation of static electrification. UNSUITABLE: Storage in the room together with chemicals (oxidants, acids) may cause fire. In the warehouse there should be no tools or machines, which are the source of sparkling. Store in an upright position. |
| Storage Class: | 3A (German VCI Guideline) |

**7.3. Specific end use(s)**

| | |
|---|---|
| Packaging materials: | RECOMMENDED: Use a metal-protected packaging. UNSUITABLE: long-term storage can not use butyl, nitrile and natural rubbers. Because of the possibility of forming explosive atmosphere (vapours), DO NOT CUT empty packaging with sparking tools. |

## 8. Exposure controls/personal protection

**8.1. Control parameters**

The prescribed of threshold limit value (TLV) for occupational exposure to hazardous substances in the atmosphere post the Regulation on the safety of employees from risks against chemical substance exposure at work:

Data on components:

| Chemical Name | TLV (mg/m3) | TLV (ml/m3, PPM) | STL | Note |
|---|---|---|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | 221 | 50 | 2 | K EU |
| reaction mixture of ethylbenzene, m-xylene and p-xylene | 221 | 50 | 2 | K EU |
| 1-butanol | 310 | 100 | 1 | Y |
| zinc oxide | 5 (A) | | 4 | |

Biological limit values for components:

| Chemical Name | Characteristic indication \| Biological sample \| Sampling time \| Biological limit values |
|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | Reaction mixture of ethylbenzene, m-xylene and p-xylene \| blood \| after working shift 14.13 mmol/l |
| reaction mixture of ethylbenzene, m-xylene and p-xylene | Reaction mixture of ethylbenzene, m-xylene and p-xylene \| blood \| after working shift 14.13 mmol/l |

DNEL = Derived No Effect Level

Component Data:

| Chemical Name | Population \| Exposure \| Effects \| Values (units) |
|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | Workers Longterm inhalational 221 mg/m3<br>Workers Shortterm inhalational 442 mg/m3<br>Workers Longterm dermal 3182 mg/kg/bw/day<br>Consumers Longterm inhalational 65.3 mg/m3<br>Consumers Shortterm inhalational 260 mg/m3<br>Consumers Longterm dermal 1872 mg/kg/bw/day |

| | |
|---|---|
| | Consumers Longterm oral 12.5 mg/kg/bw/day |

PNEC = Predicted No Effect Concentration
Component Data:

| Chemical Name | Media detail \| Values |
|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | Sea water 0.25 mg/l<br>Sediment in fresh water 14.33 mg/kg<br>Earth 2.41 mg/kg |

### 8.2. Exposure controls

| | |
|---|---|
| Respiratory protection: | When used in confined spaces, prolonged work, wear protective mask for the whole face with filter "A". In case that the oxygen concentration in the air of work room falls under 17 %, use independent respirator with an open circle on the compressed air. |
| Hand protection: | At several contacts with the product use gloves made of nytril rubber with thickness 0,40 mm, in contact with drops of product (minor contacts) the gloves made of nytril rubber of thickness 0,11 mm. |
| Eye protection: | At the low concentrations in the air wear protective goggles, at high concentrations the protective mask for the whole face. |
| Skin protection: | In normal conditions wear clothes made of cotton and suitable footwear. In case the possibility of outflow is high, use the clothes and footwear resistant to chemicals (PVC, rubber). |

## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | |
|---|---|
| (a) Appearance: | Liquid |
| (b) Odour: | No data available |
| (c) Odour threshold: | Product components have a high limit of odor detection. |
| (d) pH: | No data available |
| e) Melting point/freezing point: | - 47.9 - 13.3 °C ; computational method, based on component data ; reaction mixture of ethylbenzene, m-xylene and p-xylene |
| (f) Initial boiling point and boiling range: | 118 °C ; computational method, based on component data ; 1-butanol |
| (g) Flash point: | 25 °C ; computational method, based on component data ; reaction mixture of ethylbenzene, m-xylene and p-xylene |
| (h) Evaporation rate: | ; computational method, based on component data ; No data |
| (i) Flammability (solid, gas): | Flammable liquid and vapour. |
| (j) Upper/lower flammability or explosive limits: | 1.1<br>11.3 ; computational method, based on component data |
| (k) Vapour pressure: | 0.66 hPa at 20 °C 1-butanol |
| (l) Vapour density: | 2.6 (zrak= 1) 1-butanol |
| (m) Relative density: | 1,5 ISO 2811 |
| (n) Solubility(ies): | Negligible; 0-1% |
| (o) Partition coefficient: n-octanol/water: | ; computational method, based on component data<br>1-butanol (25 °C): 0.79 |

| | |
|---|---|
| (p) Auto-ignition temperature: | 343 °C ; computational method, based on component data ; 1-butanol |
| (q) Decomposition temperature: | No data |
| Kinematic viscosity: | > 21 mm²/s, 40 °C |
| (s) Explosive properties: | Product is not explosive. However, formation of explosive steam/air mixtures is possible. |
| **9.2. Other information** | |
| Solids content: (calculated, %) | 75 |
| Organic solvents (wght. %) | 24.80 |
| Water content: (calculated, %) | 0 |

## 10. Stability and reactivity

### 10.1. Reactivity

| | |
|---|---|
| Reactivity: | Stable - when used in accordance with the instructions. |

### 10.2. Chemical stability

| | |
|---|---|
| Stability: | The product is stable under conditions in accordance with the instructions and proper storage. |

### 10.3. Possibility of hazardous reactions

| | |
|---|---|
| Hazardous conditions: | The presence of open flame or hazardous materials. Avoid contact of product with heat, sparks, flames and other ignition sources. |

### 10.4. Conditions to avoid

| | |
|---|---|
| Unwanted conditions: | No data available |

### 10.5. Incompatible materials

| | |
|---|---|
| Incompatibility: | The product is non-reactive and compatible with majority of substances, except with extreme oxidants. Keep the product in the original packaging. Do not mix with other products. |

### 10.6. Hazardous decomposition products

| | |
|---|---|
| | No data available |

## 11. Toxicological information

### 11.1. Information on toxicological effects

**(a) acute toxicity:**

| | |
|---|---|
| ORAL | Product contains components which may have harmful effects after ingestion and may cause troubles to more sensitive individuals. Such components are: ; computational method, based on component data 1-butanol |
| DERMAL | Product contains components which may cause effects in case of contact with skin and may cause problems to some individuals. Such components are: ; computational method, based on component data reaction mixture of ethylbenzene, m-xylene and p-xylene |
| INHALATIONAL | Product contains components which may have harmful effects at contact after inhalation of vapour, mists or gas and may cause troubles to more |



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| | |
|---|---|
| | sensitive individuals. Such components are: ; computational method, based on component data reaction mixture of ethylbenzene, m-xylene and p-xylene |
| Special precautionary measures: | Wash hands thoroughly after handling. Do no eat, drink or smoke when using this product. |

Data on components:

| Chemical Name | LC50 inhalation | Oral LD50 | Dermal LD50 |
|---|---|---|---|
| trizinc bis(orthophosphate) | | OLD50 Rat > 5000 mg/kg | |
| reaction mixture of ethylbenzene, m-xylene and p-xylene | LC50-4 hours Rat 47635 mg/l | OLD50 Rat 4300 mg/kg | D LD50 Rabbit > 4350 mg/kg |
| 1-butanol | LC50-4 hours Rat 8000 ppm | OLD50 Rat 790 mg/kg | D LD50 Rabbit 3400 mg/kg |
| zinc oxide | | OLD50 Rat > 5000 mg/kg | |

**(b) skin corrosion/irritation:**

| | |
|---|---|
| Skin: | Causes skin irritation. |
| Special precautionary measures: | If skin irritation occurs: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. |

**(c) serious eye damage/irritation:**

| | |
|---|---|
| Eyes: | Causes serious eye damage. |
| Special precautionary measures: | Immediately call a POISON CENTER or doctor/physician. If eye irritation persists: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |

**(d) respiratory or skin sensitisation:**

| | |
|---|---|
| Skin: | May cause an allergic skin reaction. |
| Special precautionary measures: | Wash contaminated clothing before reuse.<br>IF ON SKIN: Wash with plenty of soap and water.<br>Wear protective gloves/protective clothing/eye protection/face protection.<br>If skin irritation or rash occurs: Get medical advice/attention.<br>Contaminated work clothing should not be allowed out of the workplace.<br>Avoid breathing dust/fume/gas/mist/vapours/spray. |

**(e) germ cell mutagenicity:**

| | |
|---|---|
| Exposure to product: | None data known. |
| Special precautionary measures: | Product does not contain components classified as mutagenic. |

**(f) carcinogenicity:**

| | |
|---|---|
| Exposure to product: | None data known. |
| Special precautionary measures: | Product does not contain components classified as cancerogenic. |

**(g) reproductive toxicity:**

| | |
|---|---|
| Exposure to product: | None data known. |
| Special precautionary measures: | Product does not contain components classified as being reprotoxic. |

**(h) STOT-single exposure:**

| | |
|---|---|
| Exposure to product: | May cause respiratory irritation. |



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| | |
|---|---|
| Special precautionary measures: | Use only outdoors or in a well-ventilated area. |

**(i) STOT-repeated exposure:**

| | |
|---|---|
| Exposure to product: | May cause damage to organs through prolonged or repeated exposure. |
| Special precautionary measures: | Get medical advice/attention if you feel unwell. Do no eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapours/spray. |

**(j) aspiration hazard:**

| | |
|---|---|
| INHALATIONAL | Product contains components which may cause aspiration hazard, but kinematic viskosity is high enough that product is not classified with aspiration hazard. |
| Special precautionary measures: | Do NOT induce vomiting. |

## 12. Ecological information

### 12.1. Toxicity

| | |
|---|---|
| Ecotoxicity - Data on components: | The product contains components that are toxic to fish and aquatic environment. |

| Chemical Name | CAS No. | Ecotoxicity conc. |
|---|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | - | LC 50 (Marine Water), 48 h Crustaceans - Palaemonetes pugio = 8500 µg/l<br>LC 50 (Fresh Water), 96 ur Oncorhynchus mykiss 3300 - 4093 µg/l<br>EC 50, 48 h: Daphnia 2930 - 4400 µg/l |
| reaction mixture of ethylbenzene, m-xylene and p-xylene | 1330-20-7 | Aquatic LC50 fish = 1 - 10 mg/l<br>Aquatic LC50 Daphnia = 1 - 10 mg/l<br>Aquatic LC50 bacteriae = 10 - 100 mg/l |
| 1-butanol | 71-36-3 | Aquatic LC50 fish > 1000 mg/l<br>Aquatic LC50 Daphnia > 1000 mg/l<br>Aquatic LC50 bacteriae > 1000 mg/l |

### 12.2. Persistence and degradability

| | |
|---|---|
| Biodegradation | No data available |

### 12.3. Bioaccumulative potential

| | |
|---|---|
| Bioconcentration: | No data available |

### 12.4. Mobility in soil

| | |
|---|---|
| Mobility | No data |

### 12.5. Results of PBT and vPvB assessment

| | |
|---|---|
| PBT and vPvB: | No data available |

### 12.6. Other adverse effects

| | |
|---|---|
| Ecotoxicity - Data on components: | Based on the classification of components, product mayl have long lasting effects to aquatic life. |

## 13. Disposal considerations

### 13.1. Waste treatment methods

| | |
|---|---|
| Product: | The product leftovers , waste and useless packaging should be handled in accordance with the Regulations on processing of special and dangerous waste (dir. 91/689/EEC, dir. 2000/532/EC).<br><br>Waste classification number: 08 01 11<br>Waste hazardeous characteristic: H3-B<br><br>The recommended dgradation method is the use of the controlled high temperature incineration or disposal to the deposits for dangerous substances. |
| Packaging: | In case the metal packaging can not be reused, it will be recycled in the ironworks or disposed at special deposits (dir. 94/62/EC, dir. 1999/177/EC). |

## 14. Transport information

| | Transport by road/by railway - ADR/RID: | Transport by sea – IMDG: | Air transport ( IATA ): |
|---|---|---|---|
| **14.1. UN number** | 1263 | 1263 | 1263 |
| **14.2. UN proper shipping name** | PAINT | PAINT trizinc bis(orthophosphate) | PAINT |
| **14.3. Transport hazard class(es)** | 3 | 3 | 3 |
| **14.4. Packing group** | III | III | III |
| Label: |   | | |
| Hazard number: | 30 | 30 | 30 |
| Tunnel restriction code: | (D/E) | | |
| Limited quantities: |  packages: inner: =< 5 units; outer: =< 30 units | | |
| Instructions for emergency EmS: | | F-E, S-E | |
| **14.5. Environmental hazards** | ENVIRONMENTALLY HAZARDOUS | Marine pollutant. | ENVIRONMENTALLY HAZARDOUS |



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| | |
|---|---|
| **14.6. Special precautions for user** | Transport with respecting transport labels and the requests of transportation legislation. |
| **14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable |

## 15. Regulatory information

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

This Safety Data Sheet has been prepared in accordance with a comprehensive chemicals legislation - REACH Regulation on chemicals and the Regulation for classification, labeling and packaging (CLP/GHS).

The product due to its (hazardous properties falls under the law of Major Accident Hazard (EU 96/82 - Seveso), is classified in category of this Regulation.

**15.2. Chemical safety assessment**

Has not been conducted.

## 16. Other information

**The importance of H phrases from Chapter 3:**
H319 - Causes serious eye irritation.
H317 - May cause an allergic skin reaction.
H315 - Causes skin irritation.
H373 - May cause damage to organs through prolonged or repeated exposure.
H335 - May cause respiratory irritation.
H312+H332 - Harmful if in contact with skin or inhaled.
H304 - May be fatal if swallowed and enters airways.
H226 - Flammable liquid and vapour.
H410 - Very toxic to aquatic life with long lasting effects.
H336 - May cause drowsiness or dizziness.
H318 - Causes serious eye damage.
H302 - Harmful if swallowed.

| | |
|---|---|
| **Changes from previous revisions:** | Changes to the sheet were made in section: 2., 3., 8., 9., 11., 12., 14., 15., 16. |
| **Literature / Data Sources:** | Supplier's / manufacturer's safety data, references to toxicological databases. |

The information in this Safety Data Sheet refer only to the mentioned product in the form as delivered and it is not necessary valid when this material is used in the combination with other materials or in the processes, which are not foreseen in the instructions for use. This information is correct to the supplier's best of knowledge and reliable at the time of the publication of this Safety data sheet. It is the user's responsibility to ascertain the suitability of the product for a specific use.

The data in this Safety data sheet do not prove the quality of the product, they are only the instructions for the safe use of the product with the user.
In case of non-compliance with the measures or incorrect use of the product , stated in the Safety data sheet we do not accept any responsibility for the consequences.



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# SAFETY DATA SHEET according to regulation EC 1907/2006 (REACH) and its updates

GraviHEL PUR topcoat 402 - 005 high gloss

Revision No.:3/ 3
First Revision Date: 17-07-15
Revision Date:02-07-16
Print Date:06-11-17

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

### 1.1. Product identifier

| | |
|---|---|
| Product | **GraviHEL PUR topcoat 402 - 005 high gloss** |
| Item code(s): | 480706 |

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

| | |
|---|---|
| Use, scope: | A high-quality top coating with high weather, mechanical, chemical and UV protection, suitable for the most demanding exposure conditions. The product is intended for professional or industrial application. |
| Restrictions on use | No restrictions known. |

### 1.3. Details of the supplier of the safety data sheet

| | |
|---|---|
| Producer | HELIOS TBLUS d.o.o.<br>Količevo 65 • 1230 Domžale, Slovenija<br>T +386 1 722 40 00 F +386 1 722 43 10 |
| Responsible person | Matija Podobnik, e-mail: matija.podobnik@helios.si |

### 1.4. Emergency telephone number

| | |
|---|---|
| Phone | In case of health hazard, consult a private or a doctor on duty. For additional information please call phone number +386 (1) 722 4383 HSE dept.). |

## 2. Hazards identification

### 2.1. Classification of the substance or mixture

**Classification (EU 1272/2008)**

| | |
|---|---|
| **Categories of danger** | Skin Corrosion/Irritation 2<br>Serious Eye Damage/Eye Irritation 2<br>Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure 2<br>Flammable Liquid 3<br>Specific Target Organ Systemic Toxicity (STOT) - Single Exposure 3<br>Hazardous to the aquatic environment - Chronic 3 |

### 2.2. Label elements

**EU 1272/2008:**

| | |
|---|---|
| **Signal Word** | **Warning** |

| | |
|---|---|
| Contains: | reaction mixture of ethylbenzene, m-xylene and p-xylene |
| **Hazard phrases (H-phrases):** | H226 - Flammable liquid and vapour.<br>H315 - Causes skin irritation.<br>H319 - Causes serious eye irritation.<br>H335 - May cause respiratory irritation.<br>H373 - May cause damage to organs through prolonged or repeated exposure.<br>H412 - Harmful to aquatic life with long lasting effects. |
| **Precautionary statements:** | P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P273 - Avoid release to the environment. P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P314 - Get medical advice/attention if you feel unwell. P332+P313 - If skin irritation occurs: Get medical advice/attention. |

### 2.3. Other hazards

| | |
|---|---|
| | Product contains organic solvents. |

## 3. Composition/information on ingredients

### 3.2. Mixtures

| | |
|---|---|
| Chemical composition: | Binder in organic solvent. |

| Chemical Name | Concentration [weight %] | CAS<br>EINECS<br>EU INDEX<br>REACH reg.no. | Classification (REGULATION (EC) No. 1272/2008)<br>Notes |
|---|---|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | 30-49,99 | -<br>905-562-9<br>-<br>01-2119555267-33 | Asp.Tox.1; H304<br>STOT RE 2; H373<br>STOT SE 3; H335<br>Eye Irrit.2; H319<br>Skin Irrit. 2; H315<br>Acute Tox. 4; H332<br>Acute Tox. 4; H312<br>Flam. Liq. 3; H226 |
| hydrocarbons, C9 aromatics | 3,0-4,99 | -<br>918-668-5<br>-<br>01-2119455851-35 | Aquatic Chronic 2; H411<br>Asp.Tox.1; H304<br>STOT SE 3; H336<br>STOT SE 3; H335<br>Flam. Liq. 3; H226 |
| | | | |

| | |
|---|---|
| **Notes:** | The classification for the product was made on basis of actual content of components.The |



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| | |
|---|---|
| | cointained substances are shown in intervals.In case of inspection check (control of classification) we are ready to send to inspection bodies on their request the actual content of individual components. |

## 4. First aid measures

### 4.1. Description of first aid measures

| | |
|---|---|
| In case of excessive inhalation: | Take victim to clean air, put it in position to rest. In the case of respiratory problems provide artificial respiration. If dizziness, headache and nausea appear, take victim to the hospital - in the lateral position and maintain clear airway pathways. |
| In case of contact with skin: | Remove contaminated clothing. Wash skin with soap and water. Do not use organic solvents or thinners. |
| In case of contact with eyes: | With clean fingers space the eyelids and direct water in the eyes (with moderate and lukewarm water jet) and rotate the eyes so that water reaches all parts of the eye. In case of eye or tearing seek medical help. |
| In case of ingestion: | Do not eat. Rinse mouth with water. Do not induce vomiting. |

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

| | |
|---|---|
| In case of excessive inhalation: | Respiratory tract irritation, coughing, burning sensation in the nasal cavity.<br>Inflammation of the upper respiratory tract, resulting in coughing, sneezing, runny nose, headache, hoarseness and pain in the nose and throat. |
| In case of contact with skin: | Slight skin irritation, which includes signs: localized redness, dryness, consequently itching is possible.<br>Inflammation of the skin, which can be seen as local redness, swelling, pain, itching and malaise. |
| In case of contact with eyes: | Slight inflammation of the eye, including the signs: painful burning and stinging, tearing, and may also be pain. Conjunctivitis may appear. |
| In case of ingestion: | None data known. |

### 4.3. Indication of any immediate medical attention and special treatment needed

| | |
|---|---|
| | No data available |

## 5. Firefighting measures

### 5.1. Extinguishing media

| | |
|---|---|
| Fire Extinguishing Media: | SUITABLE: Foam, powder, carbon dioxide, inert gas or INERGEN FM 200 (started phase fire fighting), water fog.<br>UNSUITABLE: Water jet, unless USED ONLY for water mist to cool containers with flammable products. Remove all possible sources of ignition: open flame, lit cigarette, sparkling of tools and equipment. Close packagings with product. |
| Unsuitable extinguishing media: | Open water jet |

### 5.2. Special hazards arising from the substance or mixture

| | |
|---|---|
| Specific methods of extinguishing fire: | Extinguish fire in wind direction. Cool down vessels with product, which do not burn with dispersed water, prevent leakage of the product and |

| | |
|---|---|
| | place them in a safety place. The possibility of formation man harmful gases and thick smoke during the fire. The use of protective mask with filter A is mandatory. |

### 5.3. Advice for firefighters

| | |
|---|---|
| Special equipment to protect firefighters: | Independent fire extinguisher on compressed air, a full fire-fighting equipment to protect the body. |

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

| | |
|---|---|
| Personal precautions: | Remove possible sources of ignition (flame, lit cigarette, sparkling etc.). Protect respiratory system against inhalation of vapours. Provide good ventilation. |

### 6.2. Environmental precautions

| | |
|---|---|
| Environmental precautions: | Prevent leakage into water, water dams, cellars, caves or sewage system.<br>Prevent outflow into water, water dams, cellars, caves or sewage system and vapour accumulation in closed rooms. |

### 6.3. Methods and material for containment and cleaning up

| | |
|---|---|
| Methods of cleaning up: | Absorb the outflown product and mix it with soil, sand or other absorptive materials for liquids. Leave waste to the authorized waste collectors. |

## 7. Handling and storage

### 7.1. Precautions for safe handling

| | |
|---|---|
| Personal precautions: | At the use product vapours may produce flammable/explosive mixtures of vapours and air. During the pumping static electrification may occur. Emptying of static electrification, which could cause fire. At the decanting of larger quantities assure conductivity with binding and earthing of complete equipment. Prevent contact with hot objects, sparkles, flame and sources of ignition. |
| Advice on safe handling: | Do not smoke, drink or eat while handling the product. Do not breathe vapors, avoid contact with skin and eyes. At work wear cotton overalls or coveralls, nitrile rubber gloves and safety glasses with side shields. |

### 7.2. Conditions for safe storage, including any incompatibilities

| | |
|---|---|
| Technical measures and conditions: | SUITABLE: Store in tightly closed vessels in a cool and ventilated room. Prevent the formation of static electrification. UNSUITABLE: Storage in the room together with chemicals (oxidants, acids) may cause fire. In the warehouse there should be no tools or machines, which are the source of sparkling. Store in an upright position. |
| Storage Class: | 3A (German VCI Guideline) |

### 7.3. Specific end use(s)

| | |
|---|---|
| Packaging materials: | RECOMMENDED: Use a metal-protected packaging. UNSUITABLE: long-term storage can not use butyl, nitrile and natural rubbers. Because of the possibility of forming explosive atmosphere (vapours), DO NOT CUT empty packaging with sparking tools. |

## 8. Exposure controls/personal protection

### 8.1. Control parameters

The prescribed of threshold limit value (TLV) for occupational exposure to hazardous substances in the atmosphere post the Regulation on the safety of employees from risks against chemical substance exposure at work:

Data on components:

| Chemical Name | TLV (mg/m3) | TLV (ml/m3, PPM) | STL | Note |
|---|---|---|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | 221 | 50 | 2 | K<br>EU |

Biological limit values for components:

| Chemical Name | Characteristic indication \| Biological sample \| Sampling time \| Biological limit values |
|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | Reaction mixture of ethylbenzene, m-xylene and p-xylene \| blood \| after working shift 14.13 mmol/l |

DNEL = Derived No Effect Level

Component Data:

| Chemical Name | Population \| Exposure \| Effects \| Values (units) |
|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | Workers Longterm inhalational 221 mg/m3<br>Workers Shortterm inhalational 442 mg/m3<br>Workers Longterm dermal 3182 mg/kg/bw/day<br>Consumers Longterm inhalational 65.3 mg/m3<br>Consumers Shortterm inhalational 260 mg/m3<br>Consumers Longterm dermal 1872 mg/kg/bw/day<br>Consumers Longterm oral 12.5 mg/kg/bw/day |
| hydrocarbons, C9 aromatics | Workers Longterm dermal Systemic effects 25 mg/kg/bw/day<br>Workers Longterm oral Systemic effects 150 mg/m3<br>Consumers Longterm dermal Systemic effects 11 mg/kg/bw/day<br>Consumers Longterm inhalational 32 mg/m3 |

PNEC = Predicted No Effect Concentration

Component Data:

| Chemical Name | Media detail \| Values |
|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | Sea water 0.25 mg/l<br>Sediment in fresh water 14.33 mg/kg<br>Earth 2.41 mg/kg |

### 8.2. Exposure controls

| | |
|---|---|
| Respiratory protection: | When used in confined spaces, prolonged work, wear protective mask for the whole face with filter "A". In case that the oxygen concentration in the air of work room falls under 17 %, use independent respirator with an open circle on the compressed air. |
| Hand protection: | At several contacts with the product use gloves made of nytril rubber with thickness 0,40 mm, in contact with drops of product (minor contacts) the gloves made of nytril rubber of thickness 0,11 mm. |
| Eye protection: | At the low concentrations in the air wear protective goggles, at high concentrations the protective mask for the whole face. |
| Skin protection: | In normal conditions wear clothes made of cotton and suitable footwear. In case the possibility of outflow is high, use the clothes and footwear resistant to chemicals (PVC, rubber). |

## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | |
|---|---|
| (a) Appearance: | Thick liquid |
| (b) Odour: | Specific for organic solvents |
| (c) Odour threshold: | Product components have a high limit of odor detection. |
| (d) pH: | No data available |
| e) Melting point/freezing point: | 1580 °C |
| (f) Initial boiling point and boiling range: | 138 - 141.4 °C ; computational method, based on component data ; reaction mixture of ethylbenzene, m-xylene and p-xylene |
| (g) Flash point: | 28 ( °C); ISO 3679:2015, closed cup ; |
| (h) Evaporation rate: | ; computational method, based on component data ; No data |
| (i) Flammability (solid, gas): | Flammable liquid and vapour. |
| (j) Upper/lower flammability or explosive limits: | 1.1<br>6.6 ; computational method, based on component data |
| (k) Vapour pressure: | No data |
| (l) Vapour density: | No data |
| (m) Relative density: | 1,2-1,3 ISO 2811 |
| (n) Solubility(ies): | Insoluble |
| (o) Partition coefficient: n-octanol/water: | ; computational method, based on component data |
| (p) Auto-ignition temperature: | ; computational method, based on component data ; No data |
| (q) Decomposition temperature: | No data |
| (r) Viscosity: | DIN4 20°C 70 - 90 s |
| Kinematic viscosity: | > 21 mm²/s, 40 °C |
| (s) Explosive properties: | Product is not explosive. However, formation of explosive steam/air mixtures is possible. |
| **9.2. Other information** | |
| Solids content: (calculated, %) | 54-58 |
| Organic solvents (wght. %) | 44.80 |
| Water content: (calculated, %) | 0 |

## 10. Stability and reactivity

### 10.1. Reactivity

| | |
|---|---|
| Reactivity: | Stable - when used in accordance with the instructions. |

### 10.2. Chemical stability

| | |
|---|---|
| Stability: | The product is stable under conditions in accordance with the instructions and proper storage. |



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**10.3. Possibility of hazardous reactions**

| | |
|---|---|
| Hazardous conditions: | The presence of open flame or hazardous materials. Avoid contact of product with heat, sparks, flames and other ignition sources. |

**10.4. Conditions to avoid**

| | |
|---|---|
| Unwanted conditions: | No data available |

**10.5. Incompatible materials**

| | |
|---|---|
| Incompatibility: | The product is non-reactive and compatible with majority of substances, except with extreme oxidants. Keep the product in the original packaging. Do not mix with other products. |

**10.6. Hazardous decomposition products**

| | |
|---|---|
| | No data available |

## 11. Toxicological information

**11.1. Information on toxicological effects**

**(a) acute toxicity:**

| | |
|---|---|
| ORAL | None data known. |
| DERMAL | Product contains components which may cause effects in case of contact with skin and may cause problems to some individuals. Such components are:<br>; computational method, based on component data reaction mixture of ethylbenzene, m-xylene and p-xylene |
| INHALATIONAL | Product contains components which may have harmful effects at contact after inhalation of vapour, mists or gas and may cause troubles to more sensitive individuals. Such components are: ; computational method, based on component data reaction mixture of ethylbenzene, m-xylene and p-xylene |
| Special precautionary measures: | Wash hands thoroughly after handling. Do no eat, drink or smoke when using this product. |

**(b) skin corrosion/irritation:**

| | |
|---|---|
| Skin: | Causes skin irritation. |
| Special precautionary measures: | If skin irritation occurs: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. |

**(c) serious eye damage/irritation:**

| | |
|---|---|
| Eyes: | Causes serious eye irritation. |
| Special precautionary measures: | If eye irritation persists: Get medical advice/attention. |

**(d) respiratory or skin sensitisation:**

| | |
|---|---|
| Skin: | None data known. |
| Special precautionary measures: | Product does not contain components classified as causing skin sensitivity. |

**(e) germ cell mutagenicity:**

| | |
|---|---|
| Exposure to product: | None data known. |

| | |
|---|---|
| Special precautionary measures: | Product does not contain components classified as mutagenic. |

**(f) carcinogenicity:**

| | |
|---|---|
| Exposure to product: | None data known. |
| Special precautionary measures: | Product does not contain components classified as cancerogenic. |

**(g) reproductive toxicity:**

| | |
|---|---|
| Exposure to product: | None data known. |
| Special precautionary measures: | Product does not contain components classified as being reprotoxic. |

**(h) STOT-single exposure:**

| | |
|---|---|
| Exposure to product: | May cause respiratory irritation. |
| Special precautionary measures: | Use only outdoors or in a well-ventilated area. |

**(i) STOT-repeated exposure:**

| | |
|---|---|
| Exposure to product: | May cause damage to organs through prolonged or repeated exposure. |
| Special precautionary measures: | Get medical advice/attention if you feel unwell. Do no eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapours/spray. |

**(j) aspiration hazard:**

| | |
|---|---|
| INHALATIONAL | Product contains components which may cause aspiration hazard, but kinematic viskosity is high enough that product is not classified with aspiration hazard. |
| Special precautionary measures: | Do NOT induce vomiting. |

## 12. Ecological information

### 12.1. Toxicity

| | |
|---|---|
| Ecotoxicity - Data on components: | The product contains components that are harmful to fish and aquatic environment. |

| Chemical Name | CAS No. | Ecotoxicity conc. |
|---|---|---|
| reaction mixture of ethylbenzene, m-xylene and p-xylene | - | LC 50 (Marine Water), 48 h Crustaceans - Palaemonetes pugio = 8500 µg/l<br>LC 50 (Fresh Water), 96 ur Oncorhynchus mykiss 3300 - 4093 µg/l<br>EC 50, 48 h: Daphnia 2930 - 4400 µg/l |

**12.2. Persistence and degradability**

| | |
|---|---|
| Biodegradation | No data available |

**12.3. Bioaccumulative potential**

| | |
|---|---|
| Bioconcentration: | No data available |

**12.4. Mobility in soil**

| | |
|---|---|
| Mobility | No data |

**12.5. Results of PBT and vPvB assessment**

| | |
|---|---|
| PBT and vPvB: | No data available |

**12.6. Other adverse effects**

| | |
|---|---|
| Ecotoxicity - Data on components: | Based on the classification of components, product may have adverse effects on the environment. |

## 13. Disposal considerations

**13.1. Waste treatment methods**

| | |
|---|---|
| Product: | The product leftovers , waste and useless packaging should be handled in accordance with the Regulations on processing of special and dangerous waste (dir. 91/689/EEC, dir. 2000/532/EC).<br><br>Waste classification number: 08 01 11<br>Waste hazardeous characteristic: H3-B<br><br>The recommended dgradation method is the use of the controlled high temperature incineration or disposal to the deposits for dangerous substances. |
| Packaging: | In case the metal packaging can not be reused, it will be recycled in the ironworks or disposed at special deposits (dir. 94/62/EC, dir. 1999/177/EC). |

## 14. Transport information

| | Transport by road/by railway - ADR/RID: | Transport by sea – IMDG: | Air transport ( IATA ): |
|---|---|---|---|
| **14.1. UN number** | 1263 | 1263 | 1263 |
| **14.2. UN proper shipping name** | PAINT | PAINT | PAINT |
| **14.3. Transport hazard class(es)** | 3 | 3 | 3 |
| **14.4. Packing group** | III | III | III |



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| | | | |
|---|---|---|---|
| Label: |  | | |
| Hazard number: | 30 | 30 | 30 |
| Tunnel restriction code: | (D/E) | | |
| Limited quantities: |  packages: inner: =< 5 units; outer: =< 30 units | | |
| Instructions for emergency EmS: | | F-E, S-E | |
| **14.5. Environmental hazards** | No | No | No |
| **14.6. Special precautions for user** | Transport with respecting transport labels and the requests of transportation legislation. | | |
| **14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable | | |

## 15. Regulatory information

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

This Safety Data Sheet has been prepared in accordance with a comprehensive chemicals legislation - REACH Regulation on chemicals and the Regulation for classification, labeling and packaging (CLP/GHS).

The product due to its (hazardous properties falls under the law of Major Accident Hazard (EU 96/82 - Seveso), is classified in category of this Regulation.

### 15.2. Chemical safety assessment

Has not been conducted.



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## 16. Other information

**The importance of H phrases from Chapter 3:**
H373 - May cause damage to organs through prolonged or repeated exposure.
H335 - May cause respiratory irritation.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H312+H332 - Harmful if in contact with skin or inhaled.
H304 - May be fatal if swallowed and enters airways.
H226 - Flammable liquid and vapour.
H411 - Toxic to aquatic life with long lasting effects.
H336 - May cause drowsiness or dizziness.

| | |
|---|---|
| **Changes from previous revisions:** | Changes to the sheet were made in section: 2., 3., 8., 9., 11., 12., 14., 15., 16. |
| **Literature / Data Sources:** | Supplier's / manufacturer's safety data, references to toxicological databases. |

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