



# SAFETY DATA SHEET

Elastaseal Z Embedment Coat

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

### 1.1 Product identifier

**Product name** : Elastaseal Z Embedment Coat  
**Product description** : Coating.  
**Product type** : Liquid.  
**UFI** : Y9VU-N55J-Y99S-4EGR

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

| Identified uses                      |   |
|--------------------------------------|---|
| Industrial uses<br>Professional uses |   |
| Uses advised against                 | Reason                                    |
| Consumer use                         | Product is not intended for consumer use. |

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

Tor Coatings Limited  
 Portobello Industrial Estate  
 Birtley  
 County Durham  
 United Kingdom  
 DH3 2RE  
 Telephone no.: +44 (0) 191 4106611  
 Fax no.: +44 (0) 191 4920125  
 enquiries@tor-coatings.com

**e-mail address of person responsible for this SDS** : rpmeurohas@rustoleum.eu

### 1.4 Emergency telephone number

#### Supplier

**Telephone number** : +44 (0) 207 858 1228  
**Hours of operation** : 24 / 7

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Sens. 1, H317  
 Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

## SECTION 2: Hazards identification

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : May cause an allergic skin reaction.  
Harmful to aquatic life with long lasting effects.

#### Precautionary statements

**General** : Not applicable.

**Prevention** : P280 - Wear protective gloves: nitrile rubber gloves.

**Response** : P302 + P352 - IF ON SKIN: Wash with plenty of water.  
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.

**Storage** : Not applicable.

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** : 1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate;  
hexamethylene-1,6-diisocyanate oligomer (type uretdione); polyhexamethylene diisocyanate and 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers

**Supplemental label elements** : Contains isocyanates. May produce an allergic reaction.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

#### Special packaging requirements

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

### 2.3 Other hazards

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

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

| Product/ingredient name   | Identifiers  | %    | Classification   |         |
|---|--|------|--|---------|
|   |  |      | Regulation (EC) No. 1272/2008 [CLP]  | Type    |
| 1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl) carbamate | REACH #:<br>01-0000015906-63<br>EC: 411-700-4<br>CAS: 140921-24-0<br>Index: 616-079-00-5 | ≤10  | Skin Sens. 1, H317<br>Aquatic Chronic 3, H412  | [1]     |
| Solvent naphtha (petroleum), light arom.                                | REACH #:<br>01-2119455851-35<br>EC: 265-199-0<br>CAS: 64742-95-6<br>Index: 649-356-00-4  | ≤10  | Flam. Liq. 3, H226<br>STOT SE 3, H335<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411 | [1]     |
| 2-ethylhexyl (3-isocyanatomethylphenyl) -carbamate                      | EC: 261-180-6<br>CAS: 58240-57-6   | ≤5   | Skin Irrit. 2, H315  | [1]     |
| propylene carbonate   | EC: 203-572-1<br>CAS: 108-32-7<br>Index: 607-194-00-1                                    | ≤5   | Eye Irrit. 2, H319   | [1]     |
| hexamethylene-1,6-diisocyanate oligomer (type uretdione)                | REACH #:<br>01-2119488177-26<br>EC: 931-288-4<br>CAS: 28182-81-2                         | ≤3   | Acute Tox. 3, H331<br>Skin Sens. 1, H317<br>STOT SE 3, H335  | [1] [2] |
| polyhexamethylene diisocyanate  | REACH #:<br>01-2119485796-17<br>EC: 931-274-8<br>CAS: 28182-81-2                         | ≤3   | Acute Tox. 4, H332<br>Skin Sens. 1, H317<br>STOT SE 3, H335  | [1] [2] |
| 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers      | REACH #:<br>01-2119488734-24<br>EC: 500-125-5<br>CAS: 53880-05-0                         | ≤3   | Skin Sens. 1B, H317<br>STOT SE 3, H335   | [1] [2] |
| (bis(isopropyl) naphthalene)  | REACH #:<br>01-2119565150-48<br>EC: 254-052-6<br>CAS: 38640-62-9                         | ≤3   | Asp. Tox. 1, H304<br>Aquatic Chronic 1, H410 (M=1)   | [1]     |
| tris(2-methoxyethoxy) vinylsilane                                       | EC: 213-934-0<br>CAS: 1067-53-4  | ≤0,3 | Repr. 2, H361f   | [1]     |
|   |  |      | <b>See Section 16 for the full text of the H statements declared above.</b>                              |         |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard  
 [2] Substance with a workplace exposure limit  
 [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII  
 [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII  
 [5] Substance of equivalent concern  
 [6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

Contains 1,6-hexanediy-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate, hexamethylene-1,6-diisocyanate oligomer (type uretdione), polyhexamethylene diisocyanate, 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers. May produce an allergic reaction.

**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

See toxicological information (Section 11)

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO<sub>2</sub>, powders, water spray or mist.

**Unsuitable extinguishing media** : Do not use water jet.

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

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
halogenated compounds  
metal oxide/oxides

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**Additional information** : No unusual hazard if involved in a fire.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

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

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## SECTION 6: Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

**Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.**

**Examination of lung function should be carried out on a regular basis on persons spraying this mixture.**

- 7.1 Precautions for safe handling** : Care should be taken when re-opening partly-used containers. Precautions should be taken to minimise exposure to atmospheric humidity or water. CO<sub>2</sub> will be formed, which, in closed containers, could result in pressurisation. Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws. Do not allow to enter drains or watercourses.

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

Store in accordance with local regulations.

#### Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

#### Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

**SECTION 8: Exposure controls/personal protection**

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

**8.1 Control parameters****Occupational exposure limits**

| Product/ingredient name  | Exposure limit values   |
|--|---|
| hexamethylene-1,6-diisocyanate oligomer (type uretdione)           | <b>EH40/2005 WELs (United Kingdom (UK), 8/2018). Inhalation sensitiser.</b><br>STEL: 0,07 mg/m <sup>3</sup> , (as NCO) 15 minutes.<br>TWA: 0,02 mg/m <sup>3</sup> , (as NCO) 8 hours. |
| polyhexamethylene diisocyanate                                     | <b>EH40/2005 WELs (United Kingdom (UK), 8/2018). Inhalation sensitiser.</b><br>STEL: 0,07 mg/m <sup>3</sup> , (as NCO) 15 minutes.<br>TWA: 0,02 mg/m <sup>3</sup> , (as NCO) 8 hours. |
| 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers | <b>EH40/2005 WELs (United Kingdom (UK), 8/2018). Inhalation sensitiser.</b><br>STEL: 0,07 mg/m <sup>3</sup> , (as NCO) 15 minutes.<br>TWA: 0,02 mg/m <sup>3</sup> , (as NCO) 8 hours. |

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

| Product/ingredient name                                  | Type | Exposure              | Value                  | Population                     | Effects  |
|--|------|-----------------------|------------------------|--------------------------------|----------|
| hexamethylene-1,6-diisocyanate oligomer (type uretdione) | DNEL | Short term Inhalation | 0,7 mg/m <sup>3</sup>  | Workers                        | Local    |
|  | DNEL | Long term Inhalation  | 0,35 mg/m <sup>3</sup> | Workers                        | Local    |
| polyhexamethylene diisocyanate                           | DNEL | Short term Inhalation | 1 mg/m <sup>3</sup>    | Workers                        | Local    |
|  | DNEL | Long term Inhalation  | 0,5 mg/m <sup>3</sup>  | Workers                        | Local    |
| (bis(isopropyl)naphthalene)                              | DNEL | Long term Oral        | 2,1 mg/kg bw/day       | General population [Consumers] | Systemic |
|  | DNEL | Long term Dermal      | 2,1 mg/kg bw/day       | General population [Consumers] | Systemic |
|  | DNEL | Long term Inhalation  | 7,4 mg/m <sup>3</sup>  | General population [Consumers] | Systemic |
|  | DNEL | Long term Dermal      | 4,3 mg/kg bw/day       | Workers                        | Systemic |
|  | DNEL | Long term Inhalation  | 30 mg/m <sup>3</sup>   | Workers                        | Systemic |

**PNECs**



## SECTION 8: Exposure controls/personal protection

| Product/ingredient name                                     | Compartment Detail     | Value            | Method Detail |
|---|------------------------|------------------|---------------|
| hexamethylene-1,6-diisocyanate oligomer<br>(type uretdione) | Fresh water            | >0,05 mg/l       | -             |
|   | Marine                 | >0,005 mg/l      | -             |
|   | Fresh water sediment   | >1,33 mg/kg dwt  | -             |
|   | Marine water sediment  | >0,133 mg/kg dwt | -             |
|   | Soil                   | >0,066 mg/kg dwt | -             |
|   | Sewage Treatment Plant | 55,6 mg/l        | -             |
| polyhexamethylene diisocyanate                              | Fresh water            | 0,127 mg/l       | -             |
|   | Marine                 | 0,0127 mg/l      | -             |
|   | Fresh water sediment   | 266700 mg/kg dwt | -             |
|   | Marine water sediment  | 26670 mg/kg dwt  | -             |
|   | Soil                   | 53182 mg/kg dwt  | -             |
|   | Sewage Treatment Plant | 38,28 mg/l       | -             |
| (bis(isopropyl)naphthalene)                                 | Sewage Treatment Plant | 0,15 mg/l        | -             |
|   | Fresh water            | 0,26 µg/l        | -             |
|   | Marine                 | 0,026 µg/l       | -             |
|   | Fresh water sediment   | 0,94 mg/kg dwt   | -             |
|   | Marine water sediment  | 0,094 mg/kg dwt  | -             |
|   | Soil                   | 0,19 mg/kg dwt   | -             |

### 8.2 Exposure controls

**Appropriate engineering controls** : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn. (See Occupational exposure controls.)

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: safety glasses with side-shields.

#### Skin protection

##### Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.



## SECTION 8: Exposure controls/personal protection

- Gloves** : For prolonged or repeated handling, use the following type of gloves:
- Recommended: > 8 hours (breakthrough time): nitrile rubber (0.5mm)
- The recommendation for the type or types of glove to use when handling this product is based on information from the following source:
- EN 374
- The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Wear overalls or long sleeved shirt. (EN 467)
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapour (Type A) and particulate filter (EN 141)
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Colour** : Various
- Odour** : Odourless.
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: 102°C
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : 1,42 to 1,45
- Solubility(ies)** : Insoluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): 7000 mPa·s
- Explosive properties** : Not available.
- Oxidising properties** : Not available.

**SECTION 9: Physical and chemical properties****9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions** :
- 10.4 Conditions to avoid** : In a fire, hazardous decomposition products may be produced.
- 10.5 Incompatible materials** : Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO<sub>2</sub> and smoke can be generated.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

| Product/ingredient name  | Result                          | Species      | Dose                    | Exposure |
|--|---------------------------------|--------------|-------------------------|----------|
| Solvent naphtha (petroleum), light arom.                           | LD50 Oral                       | Rat          | 8400 mg/kg              | -        |
|  | LD50 Oral                       | Rat          | >5000 mg/kg             | -        |
| propylene carbonate  | LD50 Oral                       | Rat          | >5000 mg/kg             | -        |
|  | LC50 Inhalation Dusts and mists | Rat          | 158 mg/m <sup>3</sup>   | 4 hours  |
| hexamethylene-1,6-diisocyanate oligomer (type uretdione)           | LD50 Oral                       | Rat          | >5000 mg/kg             | -        |
|  | LC50 Inhalation Dusts and mists | Rat          | 18500 mg/m <sup>3</sup> | 1 hours  |
| polyhexamethylene diisocyanate                                     | LD50 Oral                       | Rat          | >5000 mg/kg             | -        |
|  | LC50 Inhalation Dusts and mists | Rat          | 18500 mg/m <sup>3</sup> | 1 hours  |
| 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers | LC50 Inhalation Dusts and mists | Rat - Female | 0,39 mg/m <sup>3</sup>  | 4 hours  |
|  | LD50 Dermal                     | Rabbit       | >2000 mg/kg             | -        |
| (bis(isopropyl)naphthalene)  | LD50 Dermal                     | Rat          | >2000 mg/kg             | -        |
|  | LD50 Oral                       | Rat          | >5000 mg/kg             | -        |
| tris(2-methoxyethoxy) vinylsilane                                  | LC50 Inhalation Dusts and mists | Rat          | >5,01 mg/l              | 4 hours  |
|  | LD50 Oral                       | Rat          | >5000 mg/kg             | -        |
| (bis(isopropyl)naphthalene)  | LC50 Inhalation Vapour          | Rat          | 5,64 mg/l               | 4 hours  |
|  | LD50 Dermal                     | Rat          | >4500 mg/kg             | -        |
| tris(2-methoxyethoxy) vinylsilane                                  | LD50 Oral                       | Rat          | >4000 mg/kg             | -        |
|  | LD50 Oral                       | Rat          | 2960 mg/kg              | -        |

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Acute toxicity estimates**

Not available.

**Irritation/Corrosion**

## SECTION 11: Toxicological information

| Product/ingredient name   | Result                   | Species | Score | Exposure                             | Observation |
|---|--------------------------|---------|-------|--------------------------------------|-------------|
| Solvent naphtha (petroleum), light arom.<br>2-ethylhexyl<br>(3-isocyanatomethylphenyl)-<br>carbamate<br>propylene carbonate | Eyes - Mild irritant     | Rabbit  | -     | 24 hours 100 microliters             | -           |
|   | Eyes - Severe irritant   | Rabbit  | -     | 24 hours 100 microliters             | -           |
|   | Eyes - Moderate irritant | Rabbit  | -     | 60 milligrams                        | -           |
|   | Skin - Moderate irritant | Human   | -     | 72 hours 100 milligrams Intermittent | -           |
| hexamethylene-<br>1,6-diisocyanate oligomer<br>(type uretdione)   | Skin - Moderate irritant | Rabbit  | -     | 500 milligrams                       | -           |
|   | Skin - Oedema            | Rabbit  | 1     | 4 hours                              | -           |
| polyhexamethylene<br>diisocyanate   | Eyes - Cornea opacity    | Rabbit  | 1     | -                                    | -           |
|   | Skin - Oedema            | Rabbit  | 1     | 4 hours                              | -           |
|   | Eyes - Cornea opacity    | Rabbit  | 1     | -                                    | -           |
|   | Eyes - Moderate irritant | Rabbit  | -     | 100 milligrams                       | -           |
| 3-Isocyanatomethyl-<br>3,5,5-trimethylcyclohexyl<br>isocyanate, oligomers   | Skin - Moderate irritant | Rabbit  | -     | 500 milligrams                       | -           |
|   | Skin - Oedema            | Rabbit  | 0     | -                                    | -           |
|   | Eyes - Cornea opacity    | Rabbit  | 1     | -                                    | -           |
| (bis(isopropyl)naphthalene)   | Skin - Oedema            | Rabbit  | 0     | -                                    | -           |
|   | Eyes - Cornea opacity    | Rabbit  | 0     | -                                    | -           |
|   | Eyes - Moderate irritant | Rabbit  | 0     | -                                    | -           |
| tris(2-methoxyethoxy)<br>vinylsilane  | Skin - Mild irritant     | Rabbit  | -     | 500 milligrams                       | -           |

### Conclusion/Summary

- Skin** : Based on available data, the classification criteria are not met.
- Eyes** : Based on available data, the classification criteria are not met.
- Respiratory** : Based on available data, the classification criteria are not met.

### Sensitisation

| Product/ingredient name   | Route of exposure | Species    | Result          |
|---|-------------------|------------|-----------------|
| 1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl) carbamate | skin              | Guinea pig | Sensitising     |
| hexamethylene-1,6-diisocyanate oligomer (type uretdione)                | skin              | Guinea pig | Sensitising     |
| polyhexamethylene diisocyanate  | skin              | Guinea pig | Sensitising     |
|   | Respiratory       | Guinea pig | Not sensitizing |
|   | skin              | Mouse      | Sensitising     |
| 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers      | skin              | Rabbit     | Sensitising     |
|   | skin              | Mouse      | Sensitising     |
|   | skin              | Guinea pig | Sensitising     |
| (bis(isopropyl)naphthalene)   | skin              | Guinea pig | Sensitising     |
|   | skin              | Guinea pig | Not sensitizing |

### Conclusion/Summary

- Skin** : May cause an allergic skin reaction.
- Respiratory** : Based on available data, the classification criteria are not met.

## SECTION 11: Toxicological information

### Mutagenicity

| Product/ingredient name  | Test         | Experiment  | Result   |
|--|--------------|---|----------|
| hexamethylene-1,6-diisocyanate oligomer (type uretdione)           | OECD 476     | Subject: Mammalian-Animal                         | Positive |
| polyhexamethylene diisocyanate                                     | OECD 471     | Subject: Bacteria                                 | Negative |
|  | OECD 471     | Subject: Bacteria                                 | Negative |
| 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers | OECD 476     | Subject: Mammalian-Animal                         | Negative |
|  | OECD 471     | Experiment: In vitro<br>Subject: Bacteria         | Negative |
| (bis(isopropyl)naphthalene)  | OECD 473     | Experiment: In vitro<br>Subject: Mammalian-Animal | Negative |
|  | OECD 471     | Experiment: In vitro<br>Subject: Bacteria         | Negative |
|  | OECD 473+476 | Experiment: In vitro<br>Subject: Mammalian-Animal | Negative |

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Carcinogenicity

| Product/ingredient name     | Result                                       | Species | Dose | Exposure |
|-----------------------------|--|---------|------|----------|
| (bis(isopropyl)naphthalene) | Negative - Route of exposure unreported - TD | Rat     | -    | -        |

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Reproductive toxicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Teratogenicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Specific target organ toxicity (single exposure)

| Product/ingredient name  | Category   | Route of exposure | Target organs                |
|--|------------|-------------------|------------------------------|
| Solvent naphtha (petroleum), light arom.                           | Category 3 | -                 | Respiratory tract irritation |
| hexamethylene-1,6-diisocyanate oligomer (type uretdione)           | Category 3 | -                 | Narcotic effects             |
|  | Category 3 | -                 | Respiratory tract irritation |
| polyhexamethylene diisocyanate                                     | Category 3 | -                 | Respiratory tract irritation |
| 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers | Category 3 | -                 | Respiratory tract irritation |

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

| Product/ingredient name   | Result   |
|---|--|
| Solvent naphtha (petroleum), light arom.<br>(bis(isopropyl)naphthalene) | ASPIRATION HAZARD - Category 1<br>ASPIRATION HAZARD - Category 1 |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**SECTION 11: Toxicological information**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

| Product/ingredient name                                  | Result                                      | Species | Dose                   | Exposure                              |
|--|---|---------|------------------------|---------------------------------------|
| hexamethylene-1,6-diisocyanate oligomer (type uretdione) | Sub-acute NOAEL Inhalation Dusts and mists  | Rat     | 0,41 mg/m <sup>3</sup> | 6 hours; 5 days per week Intermittent |
| polyhexamethylene diisocyanate                           | Chronic NOAEL Inhalation Dusts and mists    | Rat     | 3,3 mg/m <sup>3</sup>  | 6 hours; 5 days per week Intermittent |
|  | Sub-acute LCLo Inhalation Dusts and mists   | Rat     | 4,3 mg/m <sup>3</sup>  | 6 hours; 5 days per week Intermittent |
|  | Sub-chronic LC50 Inhalation Dusts and mists | Rat     | 14,7 mg/m <sup>3</sup> | 6 hours; 5 days per week Intermittent |
|  | Sub-acute LC50 Inhalation Dusts and mists   | Rat     | 89,9 mg/m <sup>3</sup> | 6 hours; 5 days per week Intermittent |
| (bis(isopropyl)naphthalene)                              | Chronic NOAEL Oral                          | Rat     | 170 mg/kg              | 6 months                              |

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Other information** : Not available.

**SECTION 12: Ecological information****12.1 Toxicity**

There are no data available on the mixture itself.  
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

| Product/ingredient name                                  | Result                 | Species                         | Exposure |
|--|------------------------|---------------------------------|----------|
| hexamethylene-1,6-diisocyanate oligomer (type uretdione) | Acute EC50 5560 mg/l   | Bacteria                        | 3 hours  |
|  | Acute EC50 >100 mg/l   | Daphnia spec.                   | 48 hours |
|  | Acute IC50 >1000 mg/l  | Algae - Scenedesmus subspicatus | 72 hours |
| polyhexamethylene diisocyanate                           | Acute LC50 >100 mg/l   | Fish                            | 96 hours |
|  | Acute EC50 >10000 mg/l | Bacteria                        | 3 hours  |
|  | Acute EC50 >100 mg/l   | Daphnia spec.                   | 48 hours |
|  | Acute IC50 >1000 mg/l  | Algae - Scenedesmus subspicatus | 72 hours |
| (bis(isopropyl)naphthalene)                              | Acute LC50 >100 mg/l   | Fish                            | 96 hours |
|  | Acute EC10 >0,15 mg/l  | Algae                           | 72 hours |
|  | Acute EC10 >0,16 mg/l  | Daphnia spec.                   | 48 hours |
|  | Acute LC10 >0,5 mg/l   | Fish                            | 96 hours |

**SECTION 12: Ecological information**

|  |                        |               |         |
|--|------------------------|---------------|---------|
|  | Acute NOEC >0,013 mg/l | Daphnia spec. | 21 days |
|--|------------------------|---------------|---------|

**Conclusion/Summary** : Harmful to aquatic life with long lasting effects.

**12.2 Persistence and degradability**

| Product/ingredient name  | Test      | Result                       | Dose | Inoculum |
|--|-----------|------------------------------|------|----------|
| propylene carbonate<br>hexamethylene-<br>1,6-diisocyanate oligomer<br>(type uretdione) | OECD 301B | 83,5 to 87,7 % - 29 days     | -    | -        |
|  | OECD 302C | 18 % - Not readily - 28 days | -    | -        |
|  | OECD 301C | 1 % - Not readily - 28 days  | -    | -        |
|  | -         | 1 % - Not readily - 21 days  | -    | -        |
| polyhexamethylene<br>diisocyanate  | OECD 301C | 2 % - Not readily - 28 days  | -    | -        |
|  | OECD 301F | 0 % - Not readily - 28 days  | -    | -        |

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

| Product/ingredient name   | Aquatic half-life           | Photolysis        | Biodegradability |
|---|-----------------------------|-------------------|------------------|
| Solvent naphtha (petroleum),<br>light arom.                               | -                           | -                 | Readily          |
| hexamethylene-<br>1,6-diisocyanate oligomer<br>(type uretdione)           | Fresh water 0,25 days, 23°C | 50%; 0.03 day(s)  | Not readily      |
| polyhexamethylene<br>diisocyanate   | Fresh water 0,32 days, 23°C | 50%; 0.49 day(s)  | Not readily      |
| 3-Isocyanatomethyl-<br>3,5,5-trimethylcyclohexyl<br>isocyanate, oligomers | -                           | -                 | Not readily      |
| (bis(isopropyl)naphthalene)   | Fresh water 2,5 days, 20°C  | >70%; < 28 day(s) | Readily          |

**12.3 Bioaccumulative potential**

| Product/ingredient name   | LogP <sub>ow</sub> | BCF          | Potential |
|---|--------------------|--------------|-----------|
| Solvent naphtha (petroleum),<br>light arom.                     | -                  | 10 to 2500   | high      |
| 2-ethylhexyl<br>(3-isocyanatomethylphenyl)-<br>carbamate        | 5,6                | -            | high      |
| propylene carbonate   | -0,41              | -            | low       |
| hexamethylene-<br>1,6-diisocyanate oligomer<br>(type uretdione) | 5,54               | 367,7        | low       |
| polyhexamethylene<br>diisocyanate                               | 5,54               | 367,7        | low       |
| (bis(isopropyl)naphthalene)                                     | 6,081              | 1800 to 6400 | high      |
| tris(2-methoxyethoxy)<br>vinylsilane                            | 0,26               | -            | low       |

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Non-volatile.

**12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.



## SECTION 12: Ecological information

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance.

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Yes.

**Disposal considerations** : Do not allow to enter drains or watercourses. Residues in empty containers should be neutralised with a decontaminant (see section 6). Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

#### European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

| Waste code | Waste designation   |
|------------|---|
| 08 01 11*  | waste paint and varnish containing organic solvents or other hazardous substances |

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Disposal considerations** : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

|  | ADR/RID        | ADN            | IMDG           | IATA           |
|--|----------------|----------------|----------------|----------------|
| <b>14.1 UN number</b>                  | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| <b>14.2 UN proper shipping name</b>    | -              | -              | -              | -              |
| <b>14.3 Transport hazard class(es)</b> | -              | -              | -              | -              |
| <b>14.4 Packing group</b>              | -              | -              | -              | -              |

## SECTION 14: Transport information

|                                   |     |     |     |     |
|-----------------------------------|-----|-----|-----|-----|
| <b>14.5 Environmental hazards</b> | No. | No. | No. | No. |
| <b>Additional information</b>     | -   | -   | -   | -   |

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## SECTION 15: Regulatory information

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

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

##### Other EU regulations

**VOC** : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

**VOC for Ready-for-Use Mixture** : 2004/42/EC - IIA/i: 500g/l (2010). <= 220g/l VOC.

**Europe inventory** : All components are listed or exempted.

**Black List Chemicals (76/464/EEC)** :

| Product/ingredient name           | Carcinogenic effects | Mutagenic effects | Developmental effects | Fertility effects |
|-----------------------------------|----------------------|-------------------|-----------------------|-------------------|
| tris(2-methoxyethoxy) vinylsilane | Not supported        | Not supported     | Not supported         | Not supported     |

##### Ozone depleting substances (1005/2009/EU)

Not listed.

##### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

##### Seveso Directive

This product is not controlled under the Seveso Directive.

##### National regulations

**Industrial use** : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

## SECTION 15: Regulatory information

**References** : EH40/2005 Workplace exposure limits  
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2016/918

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

**CN code** : 3208 90 91

### International lists

#### National inventory

**Australia** : At least one component is not listed.  
**Canada** : Not determined.  
**China** : At least one component is not listed.  
**Japan** : **Japan inventory (ENCS)**: At least one component is not listed.  
**Japan inventory (ISHL)**: At least one component is not listed.  
**Malaysia** : Not determined  
**New Zealand** : At least one component is not listed.  
**Philippines** : At least one component is not listed.  
**Republic of Korea** : At least one component is not listed.  
**Taiwan** : Not determined.  
**Turkey** : Not determined.  
**United States** : Not determined.  
**Thailand** : Not determined.  
**Viet Nam** : Not determined.

**15.2 Chemical safety assessment** : No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number  
vPvB = Very Persistent and Very Bioaccumulative  
Not available.

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Elastaseal Z Embedment Coat

## SECTION 16: Other information

| Classification                                | Justification                      |
|---|------------------------------------|
| Skin Sens. 1, H317<br>Aquatic Chronic 3, H412 | Expert judgment<br>Expert judgment |

### Full text of H-phrases referred to in sections 2 and 3

|  |   |  |
|--|---|--|
| <b>Full text of abbreviated H statements</b> | H226<br>H304<br>H315<br>H317<br>H319<br>H331<br>H332<br>H335<br>H336<br>H361f<br>H410<br>H411<br>H412 | Flammable liquid and vapour.<br>May be fatal if swallowed and enters airways.<br>Causes skin irritation.<br>May cause an allergic skin reaction.<br>Causes serious eye irritation.<br>Toxic if inhaled.<br>Harmful if inhaled.<br>May cause respiratory irritation.<br>May cause drowsiness or dizziness.<br>Suspected of damaging fertility.<br>Very toxic to aquatic life with long lasting effects.<br>Toxic to aquatic life with long lasting effects.<br>Harmful to aquatic life with long lasting effects. |
|--|---|--|

|   |  |   |
|---|--|---|
| <b>Full text of classifications [CLP/GHS]</b> | Acute Tox. 3<br>Acute Tox. 4<br>Aquatic Chronic 1<br><br>Aquatic Chronic 2<br><br>Aquatic Chronic 3<br><br>Asp. Tox. 1<br>Eye Irrit. 2<br>Flam. Liq. 3<br>Repr. 2<br>Skin Irrit. 2<br>Skin Sens. 1<br>Skin Sens. 1B<br>STOT SE 3 | ACUTE TOXICITY - Category 3<br>ACUTE TOXICITY - Category 4<br>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1<br>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2<br>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3<br><br>ASPIRATION HAZARD - Category 1<br>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2<br>FLAMMABLE LIQUIDS - Category 3<br>REPRODUCTIVE TOXICITY - Category 2<br>SKIN CORROSION/IRRITATION - Category 2<br>SKIN SENSITISATION - Category 1<br>SKIN SENSITISATION - Category 1B<br>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 |
|---|--|---|

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### Notice to reader

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.