

# watco® SAFETY DATA SHEET

Toughline - Curing Agent

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

### 1.1 Product identifier

**Product name** : Toughline - Curing Agent  
**Product description** : Hardener. Coating.  
**Product type** : Liquid.  
**UFI** : J0G1-50MH-600F-YKK4

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

Identified uses	
Professional Industrial Consumer	
Uses advised against	Reason
None identified.	-

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

Watco UK Limited  
Eastgate Court  
195-205 High Street  
Guildford  
Surrey  
GU1 3EH  
United Kingdom  
Watco UK:  
T: +44 (0) 1483 425000 (08:00 - 18:00)  
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Watco FR  
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Kränkelsweg 14  
41748 Viersen  
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T: +49 (0) 21 62 530 17 17(08:00 - 17:00)  
F: +49 (0) 21 62 530 17 77  
info@watco.de  
Watco AT:  
T: +43 1 310 09 10

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

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

### 1.4 Emergency telephone number

[National advisory body/Poison Centre](#)

[Supplier](#)

Telephone number United Kingdom: : +44 870 8200418 / +44 2038073798  
Great Britain

Hours of operation : 24 / 7

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

[Classification according to UK CLP/GHS](#)

Acute Tox. 4, H332

Skin Sens. 1, H317

STOT SE 3, H335

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

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

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

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : H317 - May cause an allergic skin reaction.  
H332 - Harmful if inhaled.  
H335 - May cause respiratory irritation.

[Precautionary statements](#)

**General** : P103 - Read carefully and follow all instructions.  
P102 - Keep out of reach of children.  
P101 - If medical advice is needed, have product container or label at hand.

**Prevention** : P280 - Wear protective gloves.  
P284 - In case of inadequate ventilation wear respiratory protection.  
P271 - Use only outdoors or in a well-ventilated area.

**Response** : P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Storage** : Not applicable.

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

**Hazardous ingredients** : polyhexamethylene diisocyanate  
2-Oxepanone, polymer with 1,6-diisocyanatohexane and 1,6-hexanediol  
hexamethylene-di-isocyanate

**Supplemental label elements** : EUH204 - Contains isocyanates. May produce an allergic reaction.

**Supplemental label elements : Detergents - Regulation (EC) No 907/2006** : Not applicable.

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**SECTION 2: Hazards identification**

**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** : Yes, 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

Product/ingredient name	Identifiers	%	Classification	Type
polyhexamethylene diisocyanate	REACH #: 01-2119485796-17 CAS: 28182-81-2	≥50 - ≤75	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335	[1]
2-Oxepanone, polymer with 1,6-diisocyanatohexane and 1,6-hexanediol	CAS: 164250-92-4	≤10	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335	[1]
hexamethylene-di-isocyanate	REACH #: 01-2119457571-37 EC: 212-485-8 CAS: 822-06-0 Index: 615-011-00-1	<0,1	Acute Tox. 4, H302 Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335  <b>See Section 16 for the full text of the H statements declared above.</b>	[1] [2]

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

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

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

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

**SECTION 4: First aid measures**

- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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****Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- 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.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**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.

## SECTION 5: Firefighting measures

**Hazardous combustion products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 nitrogen 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 British standard BS EN 469 will provide a basic level of protection for chemical incidents.

## 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 spilled 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 spilled 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).

### 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.

**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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. 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.

### 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. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

## SECTION 7: Handling and storage

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

**Recommendations** : Not available.

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

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
hexamethylene-di-isocyanate	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020) [isocyanates, all, except methyl isocyanate]</b> Inhalation sensitiser. STEL 15 minutes: 0,07 mg/m <sup>3</sup> (as -NCO). TWA 8 hours: 0,02 mg/m <sup>3</sup> (as -NCO).

#### Biological exposure indices

No exposure indices known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS 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
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
hexamethylene-di-isocyanate	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
	DNEL	Long term Inhalation	0,35 mg/m <sup>3</sup>	Workers	Local

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## SECTION 8: Exposure controls/personal protection

	DNEL	Short term Inhalation	0,7 mg/m <sup>3</sup>	Workers	Local
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### PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
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	-
	hexamethylene-di-isocyanate	Fresh water	0,127 mg/l
Marine		0,0127 mg/l	-
Sediment		266700 mg/kg dwt	-
Soil		53182 mg/kg dwt	-
Sewage Treatment Plant		38,28 mg/l	-
Fresh water		>0,05 mg/l	-
Fresh water sediment		>1,33 mg/kg	-
Marine water		>0,005 mg/l	-
Marine water sediment		>0,133 mg/kg	-
Sewage Treatment Plant		55,6 mg/l	-
Soil		>0,066 mg/kg	-

### 8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### 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. Use eye protection according to EN 166. 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: chemical splash goggles and/or face shield.

#### Skin 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**

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- The recommendation for the type or types of glove to use when handling this product is based on information from the following source: EN374. 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: (EN 467) Overalls buttoned to the neck and wrist.
- 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: (EN 140)
- 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**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties**

- Physical state** : Liquid. [Viscous liquid.]
- Colour** : Colourless.
- Odour** : Not available.
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not relevant due to nature of the product.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosion limit** : Not available.
- Flash point** : Closed cup: 100°C (212°F) [Literature]
- Auto-ignition temperature** : Not relevant due to nature of the product.
- Decomposition temperature** : Not available.
- pH** : Not applicable.
- pH : Justification** : Product is non-soluble (in water).
- Viscosity** : Dynamic (room temperature): 450 to 670 mPa·s  
Kinematic (room temperature): 389 to 596 mm<sup>2</sup>/s [calculated.]  
Kinematic (40°C): Not available.
- Solubility(ies)** :
- Not available.
- Solubility in water** : Not available.



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## SECTION 9: Physical and chemical properties

<b>Partition coefficient: n-octanol/ water</b>	: Not applicable.
<b>Vapour pressure</b>	: <0,13 kPa (<1 mm Hg) [Literature]
<b>Evaporation rate</b>	: Not available.
<b>Relative density</b>	: Not available.
<b>Density</b>	: 1,124 to 1,158 g/cm <sup>3</sup> [DIN 53217]
<b>Vapour density</b>	: Not available.
<b>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.
<b>Particle characteristics</b>	
<b>Median particle size</b>	: Not applicable.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: No specific data.
<b>10.5 Incompatible materials</b>	: No specific data.
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
polyhexamethylene diisocyanate	LC50 Inhalation Dusts and mists	Rat - Female	0,39 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
hexamethylene-di-isocyanate	LC50 Inhalation Dusts and mists	Rat	0,124 mg/m <sup>3</sup>	4 hours
	LCLo Inhalation Dusts and mists	Rat	60 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>7000 mg/kg	-

**Conclusion/Summary** : Harmful if inhaled.

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Toughline - Curing Agent	N/A	N/A	N/A	110,1	2,2
polyhexamethylene diisocyanate	N/A	N/A	N/A	N/A	1,5
2-Oxepanone, polymer with	N/A	N/A	N/A	11	N/A
1,6-diisocyanatohexane and 1,6-hexanediol hexamethylene-di-isocyanate	500	N/A	N/A	0,05	N/A

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## SECTION 11: Toxicological information

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
polyhexamethylene diisocyanate	Eyes - Cornea opacity	Rabbit	1	-	-
	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
	Skin - Oedema	Rabbit	1	4 hours	-
hexamethylene-di-isocyanate	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
	Eyes - Redness of the conjunctivae	Rabbit	3	-	-
	Skin - Erythema/Eschar	Rabbit	3	-	-

### Respiratory or skin sensitization

Product/ingredient name	Route of exposure	Species	Result
polyhexamethylene diisocyanate	Respiratory	Guinea pig	Not sensitizing
hexamethylene-di-isocyanate	skin	Guinea pig	Sensitising
	skin	Mouse	Sensitising
hexamethylene-di-isocyanate	Respiratory	Guinea pig	Sensitising
	skin	Guinea pig	Sensitising

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
polyhexamethylene diisocyanate	OECD 471	Subject: Bacteria	Negative
hexamethylene-di-isocyanate	OECD 476	Subject: Mammalian-Animal	Negative
	OECD 471	Experiment: In vitro	Negative
	OECD 476	Subject: Bacteria	Negative
	OECD 474	Experiment: In vitro	Negative
hexamethylene-di-isocyanate	OECD 476	Subject: Mammalian-Animal	Negative
	OECD 474	Experiment: In vivo	Negative
	OECD 474	Subject: Mammalian-Animal	Negative

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

### Carcinogenicity

**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
polyhexamethylene diisocyanate	Category 3	-	Respiratory tract irritation
2-Oxepanone, polymer with 1,6-diisocyanatohexane and 1,6-hexanediol	Category 3	-	Respiratory tract irritation
hexamethylene-di-isocyanate	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

## SECTION 11: Toxicological information

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

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

### 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

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
polyhexamethylene diisocyanate	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
	Sub-acute LCLo Inhalation Dusts and mists	Rat	4,3 mg/m <sup>3</sup>	6 hours; 5 days per week Intermittent
	Chronic NOAEL Inhalation Dusts and mists	Rat	3,3 mg/m <sup>3</sup>	6 hours; 5 days per week Intermittent
hexamethylene-di-isocyanate	Chronic LCLo Inhalation Vapour	Rat	0,025 p.p.m.	30 days; 6 hours per day Intermittent

- 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.
- Reproductive toxicity** : No known significant effects or critical hazards.

**Other information** : Not available.

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

Product/ingredient name	Result	Species	Exposure
polyhexamethylene diisocyanate	Acute EC50 >10000 mg/l	Bacteria - Activated sludge	3 hours
	Acute EC50 >100 mg/l	Daphnia spec.	48 hours
	Acute IC50 >1000 mg/l	Algae - <i>Scenedesmus subspicatus</i>	72 hours
hexamethylene-di-isocyanate	Acute LC50 >100 mg/l	Fish - Zebra barbel	96 hours
	Acute EC50 >77,4 mg/l	Algae - <i>Scenedesmus subspicatus</i>	72 hours
	Acute EC50 842 mg/l	Bacteria	3 hours

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

**12.2 Persistence and degradability**

Product/ingredient name	Test	Result	Dose	Inoculum
polyhexamethylene diisocyanate	OECD 301C	2 % - Not readily - 28 days	-	-
hexamethylene-di-isocyanate	OECD 301F	42 % - 10 days	-	-
	EU 301F Ready Biodegradability - Manometric Respirometry Test	42 % - 28 days	-	-

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
polyhexamethylene diisocyanate	Fresh water 0,32 days, 23°C	50%; 0.49 day(s)	Not readily
hexamethylene-di-isocyanate	-	-	Not readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
polyhexamethylene diisocyanate	5,54	367,7	Low
hexamethylene-di-isocyanate	0,02	57,63	Low

**12.4 Mobility in soil**

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

**Mobility** : Not available.

**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.

**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**

Toughline - Curing Agent

## SECTION 13: Disposal considerations

**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.

### Waste catalogue

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

**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 spilled 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 or ID 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>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.

**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.

**14.7 Transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture** UK (GB)/REACH

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

None of the components are listed above the relevant limit.

#### Substances of very high concern

None of the components are listed above the relevant limit.

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## SECTION 15: Regulatory information

### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Toughline - Curing Agent	≥90	3

**Labelling** : 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** : II A/j. Two-pack reactive performance coatings for specific end use such as floors. EU limit value for this product : 500g/l (2010.)  
This product contains a maximum of 30 g/l VOC.

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

#### Ozone depleting substances

Not listed.

#### Prior Informed Consent (PIC)

Not listed.

#### Persistent Organic Pollutants

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

#### EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

#### 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 00

#### Inventory list

## SECTION 15: Regulatory information

<b>Australia</b>	: At least one component is not listed.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Eurasian Economic Union</b>	: <b>Russian Federation inventory</b> : Not determined.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: At least one component is not listed.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: Not determined.
<b>15.2 Chemical safety assessment</b>	: This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: ATE = Acute Toxicity Estimate GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = GB CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number SGG = Segregation Group vPvB = Very Persistent and Very Bioaccumulative
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### Procedure used to derive the classification

Classification	Justification
Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335	Calculation method Calculation method Calculation method

### Full text of abbreviated H statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

### Full text of classifications

Acute Tox. 1	ACUTE TOXICITY - Category 1
Acute Tox. 4	ACUTE TOXICITY - Category 4
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Resp. Sens. 1	RESPIRATORY SENSITISATION - Category 1
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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## SECTION 16: Other information

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### Notice to reader

**IMPORTANT NOTE:** 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 information contained in this data sheet (as may be amended from time to time) is not intended to be exhaustive and is presented in good faith and believed to be correct as of the date on which it is prepared. It is the user's responsibility to verify that this data sheet is current prior to using the product to which it relates. Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to use. Where those purposes are other than as specifically recommended in this safety data sheet, then the user uses the product at their own risk.

**MANUFACTURER'S DISCLAIMER:** the conditions, methods and factors affecting the handling, storage, application, use and disposal of the product are not under the control and knowledge of the manufacturer. Therefore the manufacturer does not assume responsibility for any adverse events which may occur in the handling, storage, application, use, misuse or disposal of the product and, so far as permitted by applicable law, the manufacturer expressly disclaims liability for any and all loss, damages and/or expenses arising out of or in any way connected to the storage, handling, use or disposal of the product. Safe handling, storage, use and disposal are the responsibility of the users. Users must comply with all applicable health and safety laws.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.