

# SAFETY DATA SHEET



TEKNODUR HARDENER 7310-00

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

### 1.1 Product identifier

**Product name** : TEKNODUR HARDENER 7310-00

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

**Product use** : Hardener.

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

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

**e-mail address of person responsible for this SDS** : Prod-safe@teknos.com

#### National contact

Teknos (UK) Limited, 7 Longlands Rd, Bicester, Oxfordshire OX26 5AH, United Kingdom. Tel. +44 (0) 1869 208005.

### 1.4 Emergency telephone number

#### National advisory body/Poison Centre

**Telephone number** : NHS: 111

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to UK CLP/GHS

Flam. Liq. 3, H226

Acute Tox. 4, H332

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Skin Sens. 1, H317

STOT SE 3, H335

STOT RE 2, H373

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** :

- H226 - Flammable liquid and vapour.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H332 - Harmful if inhaled.
- H335 - May cause respiratory irritation.
- H373 - May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

## SECTION 2: Hazards identification

<b>Prevention</b>	: P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 - Do not breathe vapour. P264 - Wash thoroughly after handling.
<b>Response</b>	: P314 - Get medical advice/attention if you feel unwell. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
<b>Storage</b>	: P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	: Contains isocyanates. May produce an allergic reaction.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: As from August 24 2023 adequate training is required before industrial or professional use.

### 2.3 Other hazards

<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	: None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
Hexamethylene diisocyanate, oligomers	REACH #: 01-2119970543-34 EC: 500-060-2 CAS: 28182-81-2	≥50 - ≤75	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]
2-Methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≥10 - <20	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
Xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤25	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 (oral, inhalation)	[1] [2]
Ethyl Benzene	EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	<2.5	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 2,	[1] [2]

Date of issue/Date of revision : 28/09/2022 Date of previous issue : 04/07/2022 Version : 1.01 2/16

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## SECTION 3: Composition/information on ingredients

Hexamethylene-di-isocyanate	REACH #: 01-2119457571-37 EC: 212-485-8 CAS: 822-06-0 Index: 615-011-00-1	≤0.4	H411 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]
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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.
- 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 following exposure or if feeling unwell. 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

## SECTION 4: First aid measures

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- 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 dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

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

- Hazards from the substance or mixture** : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- 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.

## 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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).

## SECTION 6: Accidental release measures

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

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**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

**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 breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. 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 a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidising materials. 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.

#### Seveso Directive - Reporting thresholds

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne

### 7.3 Specific end use(s)

**Recommendations** : Not available.

## SECTION 7: Handling and storage

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

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Hexamethylene diisocyanate, oligomers

**EH40/2005 WELs (United Kingdom (UK), 1/2020). [isocyanates, all, except methyl isocyanate] Inhalation sensitiser.**

STEL: 0.07 mg/m<sup>3</sup>, (as -NCO) 15 minutes.

TWA: 0.02 mg/m<sup>3</sup>, (as -NCO) 8 hours.

2-Methoxy-1-methylethyl acetate

**EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.**

STEL: 548 mg/m<sup>3</sup> 15 minutes.

TWA: 50 ppm 8 hours.

TWA: 274 mg/m<sup>3</sup> 8 hours.

STEL: 100 ppm 15 minutes.

Xylene

**EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-,m-, p- or mixed isomers] Absorbed through skin.**

STEL: 441 mg/m<sup>3</sup> 15 minutes.

TWA: 50 ppm 8 hours.

TWA: 220 mg/m<sup>3</sup> 8 hours.

STEL: 100 ppm 15 minutes.

Ethyl Benzene

**EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.**

STEL: 552 mg/m<sup>3</sup> 15 minutes.

STEL: 125 ppm 15 minutes.

TWA: 100 ppm 8 hours.

TWA: 441 mg/m<sup>3</sup> 8 hours.

Hexamethylene-di-isocyanate

**EH40/2005 WELs (United Kingdom (UK), 1/2020). [cyanides, except HCN, cyanogen and cyanogen chloride] Absorbed through skin.**

TWA: 5 mg/m<sup>3</sup>, (as CN) 8 hours.

STEL: 0.07 mg/m<sup>3</sup>, (as -NCO) 15 minutes.

**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 appropriate monitoring standards. 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 diisocyanate, oligomers	DNEL	Long term Inhalation	0.5 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	1 mg/m <sup>3</sup>	Workers	Local
2-Methoxy-1-methylethyl acetate	DNEL	Long term Oral	1.67 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	33 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	33 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	54.8 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	153.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	275 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	550 mg/m <sup>3</sup>	Workers	Local
Xylene	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term	14.8 mg/m <sup>3</sup>	General	Systemic

## SECTION 8: Exposure controls/personal protection

Ethyl Benzene	DNEL	Inhalation Long term	77 mg/m <sup>3</sup>	population Workers	Systemic
	DNEL	Inhalation Long term Dermal	108 mg/kg bw/day	General population	Systemic
	DNEL	Dermal Long term	180 mg/kg bw/day	Workers	Systemic
	DNEL	Inhalation Short term	289 mg/m <sup>3</sup>	Workers	Local
	DNEL	Inhalation Short term	289 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Inhalation Long term	65.3 mg/m <sup>3</sup>	General population	Local
	DNEL	Inhalation Short term	260 mg/m <sup>3</sup>	General population	Local
	DNEL	Inhalation Short term	260 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Inhalation Long term	221 mg/m <sup>3</sup>	Workers	Local
	DNEL	Inhalation Long term Oral	1.6 mg/kg bw/day	General population	Systemic
	DNEL	Inhalation Long term	15 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Inhalation Long term	77 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Dermal Long term	180 mg/kg bw/day	Workers	Systemic
	DNEL	Inhalation Short term	293 mg/m <sup>3</sup>	Workers	Local
	Hexamethylene-di-isocyanate	DMEL	Inhalation Long term	442 mg/m <sup>3</sup>	Workers
DMEL		Inhalation Short term	884 mg/m <sup>3</sup>	Workers	Systemic
DNEL		Inhalation Long term	0.035 mg/ m <sup>3</sup>	Workers	Local
DNEL		Inhalation Long term	0.035 mg/ m <sup>3</sup>	Workers	Systemic
DNEL		Inhalation Short term	0.07 mg/m <sup>3</sup>	Workers	Local
DNEL	Inhalation Short term	0.07 mg/m <sup>3</sup>	Workers	Systemic	

### PNECs

No PNECs available

### 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. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

#### **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: chemical splash goggles.

## SECTION 8: Exposure controls/personal protection

### Skin 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.

Recommendations : Wear suitable gloves tested to EN374.

< 1 hour (breakthrough time): Nitrile gloves. thickness > 0.3 mm

> 8 hours (breakthrough time): 4H / Silver Shield® gloves.

Wash hands before breaks and immediately after handling the product.

#### 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

#### 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.

Filter type: A 2 - P 2

#### 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

#### Appearance

- Physical state** : Liquid.
- Colour** : Colourless to light yellow.
- Odour** : Slight
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** :

Ingredient name	°C	°F	Method
Ethyl Benzene	136.1	277	OECD 104
Xylene	136.16	277.1	

- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Lower: 0.8%  
Upper: 6.7%
- Flash point** : Closed cup: 25°C (77°F)
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
2-Methoxy-1-methylethyl acetate	333	631.4	DIN 51794
Xylene	432	809.6	

- Decomposition temperature** : Not available.



## SECTION 9: Physical and chemical properties

**pH** : Not available.

**Viscosity** : Not available.

**Solubility(ies)** :  
Not available.

**Solubility in water** : Not available.

**Partition coefficient: n-octanol/ water** : Not applicable.

**Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Ethyl Benzene	9.3	1.2				
Xylene	6.7	0.89				

**Relative density** : Not available.

**Density** : 1.1 g/cm<sup>3</sup>

**Vapour density** : Not available.

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

### Particle characteristics

**Median particle size** : Not applicable.

## 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** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**10.5 Incompatible materials** : Reactive or incompatible with the following materials:  
oxidising materials

**10.6 Hazardous decomposition products** : 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
Hexamethylene diisocyanate, oligomers	LC50 Inhalation Dusts and mists	Rat	18500 mg/m <sup>3</sup>	1 hours
	LD50 Dermal	Rabbit	>5 g/kg	-
2-Methoxy-1-methylethyl acetate	LD50 Oral	Rat	8532 mg/kg	-
	LC50 Inhalation Vapour	Rat	21.7 mg/l	4 hours
Xylene	LD50 Oral	Rat	4300 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Ethyl Benzene	LD50 Oral	Rat	3500 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	124 mg/m <sup>3</sup>	4 hours
Hexamethylene-di-isocyanate	LC50 Inhalation Dusts and mists	Rat	124 mg/m <sup>3</sup>	4 hours

## SECTION 11: Toxicological information

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

### Acute toxicity estimates

Route	ATE value
Dermal	10731.71 mg/kg
Inhalation (vapours)	88 mg/l
Inhalation (dusts and mists)	1.16 mg/l

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hexamethylene diisocyanate, oligomers	Eyes - Moderate irritant	Rabbit	-	100 mg	-
Xylene	Skin - Moderate irritant	Rabbit	-	500 mg	-
	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
	Skin - Moderate irritant	Rabbit	-	100 %	-
Ethyl Benzene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 mg	-

**Conclusion/Summary** : Causes skin irritation.

### Sensitisation

**Conclusion/Summary** : May cause an allergic skin reaction.

### Mutagenicity

**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
Hexamethylene diisocyanate, oligomers	Category 3	-	Respiratory tract irritation
2-Methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
Xylene	Category 3	-	Respiratory tract irritation
Hexamethylene-di-isocyanate	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Xylene	Category 2	oral, inhalation	-
Ethyl Benzene	Category 2	-	hearing organs

### Aspiration hazard

Product/ingredient name	Result
Xylene	ASPIRATION HAZARD - Category 1
Ethyl Benzene	ASPIRATION HAZARD - Category 1

## SECTION 11: Toxicological information

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

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.  
**Inhalation** : Harmful if inhaled. May cause respiratory irritation.  
**Skin contact** : Causes skin irritation. 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** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- 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

Not available.

- Conclusion/Summary** : Not available.
- General** : May cause damage to organs through prolonged or repeated exposure. 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.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Ethyl Benzene	Acute EC50 4600 µg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6.53 mg/l Marine water	Crustaceans - Brine shrimp - Artemia sp. - Nauplii	48 hours
	Acute EC50 2.93 mg/l Fresh water	Daphnia - Water flea - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Rainbow trout,donaldson	96 hours

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## SECTION 12: Ecological information

trout - *Oncorhynchus mykiss*

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

### 12.2 Persistence and degradability

**Conclusion/Summary** : This product has not been tested for biodegradation.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Hexamethylene diisocyanate, oligomers	5.54	367.7	low
2-Methoxy-1-methylethyl acetate	1.2	-	low
Xylene	3.12	8.1 to 25.9	low
Ethyl Benzene	3.6	-	low
Hexamethylene-diisocyanate	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

### 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** : The classification of the product may meet the criteria for a hazardous waste.





**European waste catalogue (EWC)** : 080501

#### 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.

**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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	No.	No.	No.

### Additional information

ADR/RID : **Tunnel code** (D/E)

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 relevant/applicable due to nature of the product.

## 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.

##### Substances of very high concern

None of the components are listed.

##### Ozone depleting substances

Not listed.

##### Prior Informed Consent (PIC)

Not listed.

##### Persistent Organic Pollutants

Not listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : As from August 24 2023 adequate training is required before industrial or professional use.

##### Seveso Directive

This product is controlled under the Seveso Directive.

##### Danger criteria

## SECTION 15: Regulatory information

### Category

P5c

### 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.

**15.2 Chemical safety assessment** : 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.

### **Abbreviations and acronyms**

: 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

### Procedure used to derive the classification

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
STOT SE 3, H335	Calculation method
STOT RE 2, H373	Calculation method

### Full text of abbreviated H statements

## SECTION 16: Other information

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
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.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

### Full text of classifications

Acute Tox. 1	ACUTE TOXICITY - Category 1
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Resp. Sens. 1	RESPIRATORY SENSITISATION - Category 1
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

**Date of issue/ Date of revision** : 28/09/2022

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All variants

### Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

