

## HARDENER MS 1:2

Printing: 19/01/2023

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Revised: 07/12/2022

Version: 3 (Replaced 2)

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** HARDENER MS 1:2  
**Other means of identification:**  
**UFI:** Y64W-S0RG-E00N-VR10
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Car repair; hardener for coatings. For professional users only.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**  
Troton Sp. z o.o.  
Ząbrowo 14A  
78-120 Gościno - Zachodniopomorskie - Polska  
Phone: +48 94 35 123 94 - Fax: +48 94 35 126 22  
troton@troton.com.pl  
www.troton.pl / www.troton.eu
- 1.4 Emergency telephone number:** ( 8am-4pm)+48 094 35 123 94; 112

### SECTION 2: HAZARDS IDENTIFICATION \*\*

- 2.1 Classification of the substance or mixture:**  
**CLP Regulation (EC) No 1272/2008:**  
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.  
Acute Tox. 4: Acute inhalation toxicity, Category 4, H332  
Flam. Liq. 3: Flammable liquids, Category 3, H226  
Skin Irrit. 2: Skin irritation, Category 2, H315  
Skin Sens. 1: Sensitisation, skin, Category 1, H317  
STOT RE 2: Specific target organ toxicity — Repeated exposure, Hazard Category 2, H373  
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

**2.2 Label elements:**

**CLP Regulation (EC) No 1272/2008:**

**Warning**



**Hazard statements:**

Acute Tox. 4: H332 - Harmful if inhaled.  
Flam. Liq. 3: H226 - Flammable liquid and vapour.  
Skin Irrit. 2: H315 - Causes skin irritation.  
Skin Sens. 1: H317 - May cause an allergic skin reaction.  
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.  
STOT SE 3: H335 - May cause respiratory irritation.

**Precautionary statements:**

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280: Wear protective gloves/protective clothing/respiratory protection/eye protection/protective footwear.  
P302+P352: IF ON SKIN: Wash with plenty of water.  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P403+P233: Store in a well-ventilated place. Keep container tightly closed.  
P403+P235: Store in a well-ventilated place. Keep cool.  
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

**Supplementary information:**

EUH204: Contains isocyanates. May produce an allergic reaction.

**Substances that contribute to the classification**

Hexamethylene diisocyanate, oligomers; m-xylene; p-xylene; Ethylbenzene

\*\* Changes with regards to the previous version

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## Safety data sheet

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**SECTION 2: HAZARDS IDENTIFICATION \*\* (continued)**
**Additional Labelling:**

As from 24 August 2023 adequate training is required before industrial or professional use.

**2.3 Other hazards:**

Product fails to meet PBT/vPvB criteria

Endocrine-disrupting properties: The product fails to meet the criteria.

\*\* Changes with regards to the previous version

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS \*\***
**3.1 Substance:**

Non-applicable

**3.2 Mixture:**
**Chemical description:** Mixture composed of chemical products

**Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: 28182-81-2 EC: 931-274-8 Index: Non-applicable REACH: 01-2119485796-17-XXXX	<b>Hexamethylene diisocyanate, oligomers<sup>(1)</sup></b> Regulation 1272/2008	Self-classified Acute Tox. 4: H332; Skin Sens. 1: H317; STOT SE 3: H335 - Warning	25 - <50 % 
CAS: 108-38-3 EC: 203-576-3 Index: 601-022-00-9 REACH: 01-2119484621-37-XXXX	<b>m-xylene<sup>(1)</sup></b> Regulation 1272/2008	ATP CLP00 Acute Tox. 4: H312+H332; Flam. Liq. 3: H226; Skin Irrit. 2: H315 - Warning	10 - <25 %  
CAS: 106-42-3 EC: 203-396-5 Index: 601-022-00-9 REACH: 01-2119484661-33-XXXX	<b>p-xylene<sup>(1)</sup></b> Regulation 1272/2008	ATP CLP00 Acute Tox. 4: H312+H332; Flam. Liq. 3: H226; Skin Irrit. 2: H315 - Warning	10 - <25 %  
CAS: 100-41-4 EC: 202-849-4 Index: 601-023-00-4 REACH: 01-2119489370-35-XXXX	<b>Ethylbenzene<sup>(1)</sup></b> Regulation 1272/2008	ATP ATP06 Acute Tox. 4: H332; Asp. Tox. 1: H304; Flam. Liq. 2: H225; STOT RE 2: H373 - Danger	10 - <25 %   
CAS: 112-07-2 EC: 203-933-3 Index: 607-038-00-2 REACH: 01-2119475112-47-XXXX	<b>2-butoxyethyl acetate<sup>(1)</sup></b> Regulation 1272/2008	ATP CLP00 Acute Tox. 4: H312+H332 - Warning	10 - <25 % 
CAS: 123-86-4 EC: 204-658-1 Index: 607-025-00-1 REACH: 01-2119485493-29-XXXX	<b>N-butyl acetate<sup>(1)</sup></b> Regulation 1272/2008	ATP CLP00 Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning	5 - <10 %  
CAS: 108-65-6 EC: 203-603-9 Index: 607-195-00-7 REACH: 01-2119475791-29-XXXX	<b>2-methoxy-1-methylethyl acetate<sup>(2)</sup></b> Regulation 1272/2008	ATP ATP01 Flam. Liq. 3: H226 - Warning	5 - <10 % 

<sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

<sup>(2)</sup> Substance with a Union workplace exposure limit

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

\*\* Changes with regards to the previous version

**SECTION 4: FIRST AID MEASURES**
**4.1 Description of first aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

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**SECTION 4: FIRST AID MEASURES (continued)****By inhalation:**

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

**By skin contact:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

**By eye contact:**

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

**By ingestion/aspiration:**

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES****5.1 Extinguishing media:****Suitable extinguishing media:**

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO<sub>2</sub>).

**Unsuitable extinguishing media:**

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

**5.2 Special hazards arising from the substance or mixture:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Advice for firefighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures:****For non-emergency personnel:**

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

**For emergency responders:**

Wear protective equipment. Keep unprotected persons away. See section 8.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)**

**6.2 Environmental precautions:**

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

**6.3 Methods and material for containment and cleaning up:**

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

**6.4 Reference to other sections:**

See sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling:**

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

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

A.- Technical measures for storage

Minimum Temp.: 15 °C  
 Maximum Temp.: 25 °C  
 Maximum time: 12 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

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

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
	IOELV (8h)	50 ppm	221 mg/m <sup>3</sup>
m-xylene CAS: 108-38-3 EC: 203-576-3	IOELV (STEL)	100 ppm	442 mg/m <sup>3</sup>
	IOELV (8h)	50 ppm	221 mg/m <sup>3</sup>
p-xylene CAS: 106-42-3 EC: 203-396-5	IOELV (STEL)	100 ppm	442 mg/m <sup>3</sup>
	IOELV (8h)	50 ppm	221 mg/m <sup>3</sup>

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification		Occupational exposure limits		
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	IOELV (8h)	100 ppm	442 mg/m <sup>3</sup>	
	IOELV (STEL)	200 ppm	884 mg/m <sup>3</sup>	
2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3	IOELV (8h)	20 ppm	133 mg/m <sup>3</sup>	
	IOELV (STEL)	50 ppm	333 mg/m <sup>3</sup>	
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	IOELV (8h)	50 ppm	241 mg/m <sup>3</sup>	
	IOELV (STEL)	150 ppm	723 mg/m <sup>3</sup>	
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	IOELV (8h)	50 ppm	275 mg/m <sup>3</sup>	
	IOELV (STEL)	100 ppm	550 mg/m <sup>3</sup>	

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	1 mg/m <sup>3</sup>	Non-applicable	0,5 mg/m <sup>3</sup>
m-xylene CAS: 108-38-3 EC: 203-576-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	212 mg/kg	Non-applicable
	Inhalation	442 mg/m <sup>3</sup>	442 mg/m <sup>3</sup>	221 mg/m <sup>3</sup>	221 mg/m <sup>3</sup>
p-xylene CAS: 106-42-3 EC: 203-396-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	212 mg/kg	Non-applicable
	Inhalation	442 mg/m <sup>3</sup>	442 mg/m <sup>3</sup>	221 mg/m <sup>3</sup>	221 mg/m <sup>3</sup>
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	180 mg/kg	Non-applicable
	Inhalation	Non-applicable	293 mg/m <sup>3</sup>	77 mg/m <sup>3</sup>	Non-applicable
2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	120 mg/kg	Non-applicable	169 mg/kg	Non-applicable
	Inhalation	Non-applicable	333 mg/m <sup>3</sup>	133 mg/m <sup>3</sup>	Non-applicable
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	11 mg/kg	Non-applicable	11 mg/kg	Non-applicable
	Inhalation	600 mg/m <sup>3</sup>	600 mg/m <sup>3</sup>	300 mg/m <sup>3</sup>	300 mg/m <sup>3</sup>
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	796 mg/kg	Non-applicable
	Inhalation	Non-applicable	550 mg/m <sup>3</sup>	275 mg/m <sup>3</sup>	Non-applicable

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
m-xylene CAS: 108-38-3 EC: 203-576-3	Oral	Non-applicable	Non-applicable	2,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	125 mg/kg	Non-applicable
	Inhalation	260 mg/m <sup>3</sup>	260 mg/m <sup>3</sup>	65,3 mg/m <sup>3</sup>	65,3 mg/m <sup>3</sup>
p-xylene CAS: 106-42-3 EC: 203-396-5	Oral	Non-applicable	Non-applicable	5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	125 mg/kg	Non-applicable
	Inhalation	260 mg/m <sup>3</sup>	260 mg/m <sup>3</sup>	65,3 mg/m <sup>3</sup>	65,3 mg/m <sup>3</sup>
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Oral	Non-applicable	Non-applicable	1,6 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	15 mg/m <sup>3</sup>	Non-applicable
2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3	Oral	36 mg/kg	Non-applicable	8,6 mg/kg	Non-applicable
	Dermal	72 mg/kg	Non-applicable	102 mg/kg	Non-applicable
	Inhalation	Non-applicable	200 mg/m <sup>3</sup>	80 mg/m <sup>3</sup>	Non-applicable
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Oral	2 mg/kg	Non-applicable	2 mg/kg	Non-applicable
	Dermal	6 mg/kg	Non-applicable	6 mg/kg	Non-applicable
	Inhalation	300 mg/m <sup>3</sup>	300 mg/m <sup>3</sup>	35,7 mg/m <sup>3</sup>	35,7 mg/m <sup>3</sup>

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	Oral	Non-applicable	Non-applicable	36 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	320 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	33 mg/m <sup>3</sup>	33 mg/m <sup>3</sup>

**PNEC:**

Identification		Short exposure		Long exposure	
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	STP	88 mg/L	Fresh water	0,127 mg/L	
	Soil	53183 mg/kg	Marine water	0,013 mg/L	
	Intermittent	1,27 mg/L	Sediment (Fresh water)	266701 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	26670 mg/kg	
m-xylene CAS: 108-38-3 EC: 203-576-3	STP	1,6 mg/L	Fresh water	0,044 mg/L	
	Soil	0,852 mg/kg	Marine water	0,004 mg/L	
	Intermittent	0,01 mg/L	Sediment (Fresh water)	2,52 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	0,252 mg/kg	
p-xylene CAS: 106-42-3 EC: 203-396-5	STP	1,6 mg/L	Fresh water	0,044 mg/L	
	Soil	0,852 mg/kg	Marine water	0,004 mg/L	
	Intermittent	0,01 mg/L	Sediment (Fresh water)	2,52 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	0,252 mg/kg	
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	STP	9,6 mg/L	Fresh water	0,1 mg/L	
	Soil	2,68 mg/kg	Marine water	0,01 mg/L	
	Intermittent	0,1 mg/L	Sediment (Fresh water)	13,7 mg/kg	
	Oral	0,02 g/kg	Sediment (Marine water)	1,37 mg/kg	
2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3	STP	90 mg/L	Fresh water	0,304 mg/L	
	Soil	0,415 mg/kg	Marine water	0,03 mg/L	
	Intermittent	0,56 mg/L	Sediment (Fresh water)	2,03 mg/kg	
	Oral	0,06 g/kg	Sediment (Marine water)	0,203 mg/kg	
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	STP	35,6 mg/L	Fresh water	0,18 mg/L	
	Soil	0,09 mg/kg	Marine water	0,018 mg/L	
	Intermittent	0,36 mg/L	Sediment (Fresh water)	0,981 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	0,098 mg/kg	
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	STP	100 mg/L	Fresh water	0,635 mg/L	
	Soil	0,29 mg/kg	Marine water	0,064 mg/L	
	Intermittent	6,35 mg/L	Sediment (Fresh water)	3,29 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	0,329 mg/kg	



**8.2 Exposure controls:**

A.- Individual protection measures, such as personal protective equipment

In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have CE marking in accordance with Directive 2016/425/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours (Filter type: A)		EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**





Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves (Material: Nitrile, Breakthrough time: > 480 min, Thickness: 0.4 mm)		EN ISO 374-1:2016+A1:2018 EN 16523-1:2015+A1:2018 EN ISO 21420:2020	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.



D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties		EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties		EN ISO 13287:2020 EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES \*\***

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

For complete information see the product datasheet.

**Appearance:**

Physical state at 20 °C: Liquid  
 Appearance: Fluid  
 Colour: Colourless  
 Odour: Characteristic  
 Odour threshold: Non-applicable \*

**Volatility:**

Boiling point at atmospheric pressure: 143 °C  
 Vapour pressure at 20 °C: 598 Pa

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES \*\* (continued)**

Vapour pressure at 50 °C: 2978,64 Pa (2,98 kPa)

Evaporation rate at 20 °C: Non-applicable \*

**Product description:**Density at 20 °C: 1 kg/m<sup>3</sup>

Relative density at 20 °C: 0,951

Dynamic viscosity at 20 °C: 3000 cP

Kinematic viscosity at 20 °C: 3156,18 mm<sup>2</sup>/s

Kinematic viscosity at 40 °C: Non-applicable \*

Concentration: Non-applicable \*

pH: Non-applicable \*

Vapour density at 20 °C: Non-applicable \*

Partition coefficient n-octanol/water 20 °C: Non-applicable \*

Solubility in water at 20 °C: Non-applicable \*

Solubility properties: Non-applicable \*

Decomposition temperature: Non-applicable \*

Melting point/freezing point: Non-applicable \*

**Flammability:**

Flash Point: 34 °C

Flammability (solid, gas): Non-applicable \*

Autoignition temperature: 180 °C

Lower flammability limit: Not available

Upper flammability limit: Not available

**Particle characteristics:**

Median equivalent diameter: Non-applicable

**9.2 Other information:****Information with regard to physical hazard classes:**

Explosive properties: Non-applicable \*

Oxidising properties: Non-applicable \*

Corrosive to metals: Non-applicable \*

Heat of combustion: Non-applicable \*

Aerosols-total percentage (by mass) of flammable components: Non-applicable \*

**Other safety characteristics:**

Surface tension at 20 °C: Non-applicable \*

Refraction index: Non-applicable \*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

*\*\* Changes with regards to the previous version***SECTION 10: STABILITY AND REACTIVITY****10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

**10.2 Chemical stability:**

Chemically stable under the indicated conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

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**SECTION 10: STABILITY AND REACTIVITY (continued)**
**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

**10.5 Incompatible materials:**

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

**10.6 Hazardous decomposition products:**

 See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION \*\***
**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**

The experimental information related to the toxicological properties of the product itself is not available

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

**A- Ingestion (acute effect):**

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

**B- Inhalation (acute effect):**

- Acute toxicity : Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

**C- Contact with the skin and the eyes (acute effect):**

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):**

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.  
IARC: Ethylbenzene (2B); m-xylene (3); p-xylene (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

**E- Sensitizing effects:**

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

**F- Specific target organ toxicity (STOT) - single exposure:**

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

**G- Specific target organ toxicity (STOT)-repeated exposure:**

\*\* Changes with regards to the previous version

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**SECTION 11: TOXICOLOGICAL INFORMATION \*\* (continued)**

- Specific target organ toxicity (STOT)-repeated exposure: Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Skin: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	LD50 oral	12789 mg/kg	Rat
	LD50 dermal	14112 mg/kg	Rabbit
	LC50 inhalation	23,4 mg/L (4 h)	Rat
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	LD50 oral	5100 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	11 mg/L (ATEi)	
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	LD50 oral	3500 mg/kg	Rat
	LD50 dermal	15354 mg/kg	Rabbit
	LC50 inhalation	17,2 mg/L (4 h)	Rat
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	LD50 oral	8532 mg/kg	Rat
	LD50 dermal	5100 mg/kg	Rat
	LC50 inhalation	30 mg/L (4 h)	Rat
m-xylene CAS: 108-38-3 EC: 203-576-3	LD50 oral	1590 mg/kg	Mouse
	LD50 dermal	1100 mg/kg (ATEi)	
	LC50 inhalation	11 mg/L (ATEi)	
p-xylene CAS: 106-42-3 EC: 203-396-5	LD50 oral	1590 mg/kg	Mouse
	LD50 dermal	1100 mg/kg (ATEi)	
	LC50 inhalation	11 mg/L (ATEi)	
2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	1480 mg/kg	Rabbit
	LC50 inhalation	11 mg/L (4 h)	Rat

**Acute Toxicity Estimate (ATE mix):**

	ATE mix	Ingredient(s) of unknown toxicity
Oral	4925,65 mg/kg (Calculation method)	0 %
Dermal	2769,91 mg/kg (Calculation method)	0 %
Inhalation	13,64 mg/L (4 h) (Calculation method)	0 %

**11.2 Information on other hazards:**
**Endocrine disrupting properties**

Endocrine-disrupting properties: The product fails to meet the criteria.

**Other information**

Non-applicable

\*\* Changes with regards to the previous version

**SECTION 12: ECOLOGICAL INFORMATION \*\***

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**
**Acute toxicity:**

\*\* Changes with regards to the previous version

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**SECTION 12: ECOLOGICAL INFORMATION \*\* (continued)**

Identification	Concentration		Species	Genus
	LC50	Non-applicable		
Hexamethylene diisocyanate, oligomers CAS: 28182-81-2 EC: 931-274-8	LC50	Non-applicable		
	EC50	Non-applicable		
	EC50	1000 mg/L (72 h)	Scenedesmus subspicatus	Algae
m-xylene CAS: 108-38-3 EC: 203-576-3	LC50	16 mg/L (96 h)	Carassius auratus	Fish
	EC50	9,56 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
p-xylene CAS: 106-42-3 EC: 203-396-5	LC50	2,6 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	8,5 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	LC50	42,3 mg/L (96 h)	Pimephales promelas	Fish
	EC50	75 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	63 mg/L (3 h)	Chlorella vulgaris	Algae
2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3	LC50	80 mg/L (48 h)	Leuciscus idus	Fish
	EC50	37 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	500 mg/L (72 h)	Scenedesmus subspicatus	Algae
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	LC50	Non-applicable		
	EC50	Non-applicable		
	EC50	675 mg/L (72 h)	Scenedesmus subspicatus	Algae
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	LC50	161 mg/L (96 h)	Pimephales promelas	Fish
	EC50	481 mg/L (48 h)	Daphnia sp.	Crustacean
	EC50	Non-applicable		

**Chronic toxicity:**

Identification	Concentration		Species	Genus
	NOEC	0,714 mg/L		
m-xylene CAS: 108-38-3 EC: 203-576-3	NOEC	0,714 mg/L	Danio rerio	Fish
	NOEC	1,57 mg/L	Daphnia magna	Crustacean
p-xylene CAS: 106-42-3 EC: 203-396-5	NOEC	0,714 mg/L	Danio rerio	Fish
	NOEC	1,57 mg/L	Daphnia magna	Crustacean
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	NOEC	Non-applicable		
	NOEC	0,96 mg/L	Ceriodaphnia dubia	Crustacean
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	NOEC	Non-applicable		
	NOEC	23,2 mg/L	Daphnia magna	Crustacean
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	NOEC	47,5 mg/L	Oryzias latipes	Fish
	NOEC	100 mg/L	Daphnia magna	Crustacean

**12.2 Persistence and degradability:**

**Substance-specific information:**

Identification	Degradability		Biodegradability	
	BOD5	Non-applicable	Concentration	100 mg/L
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	90 %
	BOD5	Non-applicable	Concentration	30 mg/L
2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	77,3 %
	BOD5	Non-applicable	Concentration	Non-applicable
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	COD	Non-applicable	Period	5 days
	BOD5/COD	Non-applicable	% Biodegradable	84 %
	BOD5	Non-applicable	Concentration	785 mg/L
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	COD	Non-applicable	Period	8 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %

**12.3 Bioaccumulative potential:**

**Substance-specific information:**

\*\* Changes with regards to the previous version

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**SECTION 12: ECOLOGICAL INFORMATION \*\* (continued)**

Identification	Bioaccumulation potential	
m-xylene CAS: 108-38-3 EC: 203-576-3	BCF	15
	Pow Log	3.2
	Potential	Low
p-xylene CAS: 106-42-3 EC: 203-396-5	BCF	15
	Pow Log	3.15
	Potential	Low
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	BCF	1
	Pow Log	3.15
	Potential	Low
2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3	BCF	3
	Pow Log	1.51
	Potential	Low
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	BCF	4
	Pow Log	1.78
	Potential	Low
2-methoxy-1-methylethyl acetate CAS: 108-65-6 EC: 203-603-9	BCF	1
	Pow Log	0.43
	Potential	Low

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
m-xylene CAS: 108-38-3 EC: 203-576-3	Koc	182	Henry	790,34 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	2,826E-2 N/m (25 °C)	Moist soil	Yes
p-xylene CAS: 106-42-3 EC: 203-396-5	Koc	540	Henry	699,14 Pa·m <sup>3</sup> /mol
	Conclusion	Low	Dry soil	Yes
	Surface tension	2,792E-2 N/m (25 °C)	Moist soil	Yes
Ethylbenzene CAS: 100-41-4 EC: 202-849-4	Koc	520	Henry	798,44 Pa·m <sup>3</sup> /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	2,859E-2 N/m (25 °C)	Moist soil	Yes
2-butoxyethyl acetate CAS: 112-07-2 EC: 203-933-3	Koc	Non-applicable	Henry	5,532E-1 Pa·m <sup>3</sup> /mol
	Conclusion	Non-applicable	Dry soil	No
	Surface tension	Non-applicable	Moist soil	Yes
N-butyl acetate CAS: 123-86-4 EC: 204-658-1	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,478E-2 N/m (25 °C)	Moist soil	Non-applicable

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

Product fails to meet PBT/vPvB criteria

**12.6 Endocrine disrupting properties:**

Endocrine-disrupting properties: The product fails to meet the criteria.

**12.7 Other adverse effects:**

Not described

\*\* Changes with regards to the previous version

**SECTION 13: DISPOSAL CONSIDERATIONS**
**13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 01 11* 15 01 10*	waste paint and varnish containing organic solvents or other hazardous substances packaging containing residues of or contaminated by hazardous substances	Dangerous

**Type of waste (Regulation (EU) No 1357/2014):**

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**SECTION 13: DISPOSAL CONSIDERATIONS (continued)**

HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP13 Sensitising, HP4 Irritant — skin irritation and eye damage

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION**

**Transport of dangerous goods by land:**

With regard to ADR 2021 and RID 2021:



- 14.1 UN number or ID number:** UN1263
- 14.2 UN proper shipping name:** PAINT
- 14.3 Transport hazard class(es):** 3  
Labels: 3
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**  
Special regulations: 163, 367, 650  
Tunnel restriction code: D/E  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 40-20:



- 14.1 UN number or ID number:** UN1263
- 14.2 UN proper shipping name:** PAINT
- 14.3 Transport hazard class(es):** 3  
Labels: 3
- 14.4 Packing group:** III
- 14.5 Marine pollutant:** No
- 14.6 Special precautions for user**  
Special regulations: 223, 955, 163, 367  
EmS Codes: F-E, S-E  
Physico-Chemical properties: see section 9  
Limited quantities: 5 L  
Segregation group: Non-applicable
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2022:

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**SECTION 14: TRANSPORT INFORMATION (continued)**



- 14.1 UN number or ID number:** UN1263
- 14.2 UN proper shipping name:** PAINT
- 14.3 Transport hazard class(es):** 3  
Labels: 3
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user**  
Physico-Chemical properties: see section 9
- 14.7 Maritime transport in bulk according to IMO instruments:** Non-applicable

**SECTION 15: REGULATORY INFORMATION**

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable  
 Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable  
 Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable  
 Article 95, REGULATION (EU) No 528/2012: Non-applicable  
 REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Seveso III:**

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c	FLAMMABLE LIQUIDS	5000	50000

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):**

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**SECTION 15: REGULATORY INFORMATION (continued)**

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Contains more than 0.1 % of Hexamethylene diisocyanate, oligomers by weight. 1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).

2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:

(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or (b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: "As from 24 August 2023 adequate training is required before industrial or professional use".

3. For the purpose of this entry "industrial and professional user(s)" means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.

4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:

(a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).

(b) the training elements in points (a) and (b) of paragraph 5 for the following uses:

- handling open mixtures at ambient temperature (including foam tunnels)
- spraying in a ventilated booth
- application by roller
- application by brush
- application by dipping and pouring
- mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore
- cleaning and waste
- any other uses with similar exposure through the dermal and/or inhalation route

(c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:

- handling incompletely cured articles (e.g. freshly cured, still warm)
- foundry applications
- maintenance and repair that needs access to equipment
- open handling of warm or hot formulations (> 45 °C)
- spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers)
- and any other uses with similar exposure through the dermal and/or inhalation route.

5. Training elements:

(a) general training, including on-line training, on:

- chemistry of diisocyanates
- toxicity hazards (including acute toxicity)
- exposure to diisocyanates
- occupational exposure limit values
- how sensitisation can develop
- odour as indication of hazard
- importance of volatility for risk
- viscosity, temperature, and molecular weight of diisocyanates
- personal hygiene
- personal protective equipment needed, including practical instructions for its correct use and its limitations
- risk of dermal contact and inhalation exposure
- risk in relation to application process used
- skin and inhalation protection scheme
- ventilation
- cleaning, leakages, maintenance
- discarding empty packaging
- protection of bystanders
- identification of critical handling stages
- specific national code systems (if applicable)
- behaviour-based safety

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**SECTION 15: REGULATORY INFORMATION (continued)**

- certification or documented proof that training has been successfully completed
  - (b) intermediate level training, including on-line training, on:
    - additional behaviour-based aspects
    - maintenance
    - management of change
    - evaluation of existing safety instructions
    - risk in relation to application process used
  - certification or documented proof that training has been successfully completed
  - (c) advanced training, including on-line training, on:
    - any additional certification needed for the specific uses covered
    - spraying outside a spraying booth
    - open handling of hot or warm formulations (> 45 °C)
  - certification or documented proof that training has been successfully completed
6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture (s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.
7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.
8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.
9. Member States shall include in their reports pursuant to Article 117(1) the following information:
- (a) any established training requirements and other risk management measures related to the industrial and professional uses of diisocyanates foreseen in national law
  - (b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates
  - (c) national exposure limits for diisocyanates, if there are any
  - (d) information about enforcement activities related to this restriction.
10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace.

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

**Other legislation:**

The product could be affected by sectorial legislation

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION \*\*****Legislation related to safety data sheets:**

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

**Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:**

\*\* Changes with regards to the previous version



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**SECTION 16: OTHER INFORMATION \*\* (continued)****COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3, SECTION 11, SECTION 12):**

- New declared substances
  - m-xylene (108-38-3)
  - p-xylene (106-42-3)
  - 2-butoxyethyl acetate (112-07-2)
- Removed substances
  - Hexamethylene-di-isocyanate (822-06-0)
  - Xylene (1330-20-7)

**Substances that contribute to the classification (SECTION 2):**

- New declared substances
  - Ethylbenzene (100-41-4)
  - m-xylene (108-38-3)
  - p-xylene (106-42-3)
- Removed substances
  - N-butyl acetate (123-86-4)
  - Hexamethylene-di-isocyanate (822-06-0)
  - Xylene (1330-20-7)

**CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):**

- Hazard statements
- Precautionary statements

**Information on basic physical and chemical properties (SECTION 9):**

- Flash Point

**Texts of the legislative phrases mentioned in section 2:**

H317: May cause an allergic skin reaction.

H335: May cause respiratory irritation.

H373: May cause damage to organs through prolonged or repeated exposure.

H315: Causes skin irritation.

H332: Harmful if inhaled.

H226: Flammable liquid and vapour.

**Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**CLP Regulation (EC) No 1272/2008:**

Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled.

Acute Tox. 4: H332 - Harmful if inhaled.

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Skin Irrit. 2: H315 - Causes skin irritation.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

STOT SE 3: H335 - May cause respiratory irritation.

STOT SE 3: H336 - May cause drowsiness or dizziness.

**Classification procedure:**

Skin Sens. 1: Calculation method

STOT SE 3: Calculation method

STOT RE 2: Calculation method

Skin Irrit. 2: Calculation method

Acute Tox. 4: Calculation method

Flam. Liq. 3: Calculation method (2.6.4.3)

**Advice related to training:**

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

\*\* Changes with regards to the previous version

- CONTINUED ON NEXT PAGE -

## Safety data sheet

This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation

**HARDENER MS 1:2**

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**SECTION 16: OTHER INFORMATION \*\* (continued)**

ADR: European agreement concerning the international carriage of dangerous goods by road  
IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
LC50: Lethal Concentration 50  
EC50: Effective concentration 50  
LogPOW: Octanolwater partition coefficient  
Koc: Partition coefficient of organic carbon  
UFI: unique formula identifier  
IARC: International Agency for Research on Cancer

*\*\* Changes with regards to the previous version*

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -