

**CH040\* - CHEMIPOL SEAL& BOND PU40**

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Version: 1

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier:** CH040\* - CHEMIPOL SEAL& BOND PU40**Other means of identification:****UFI:** WGP7-CJYV-0C00-FP0Y**1.2 Relevant identified uses of the substance or mixture and uses advised against:**

Relevant uses: Sealant

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:**

Lusavouga  
Avenida Europa, 375  
3800-533 Aveiro - Cacia - Portugal  
Phone: +351 234 915 010 - Fax: +351 234 915 015  
lusavouga@lusavouga.pt  
www.chemitool.com

**1.4 Emergency telephone number:** CIAV 800 250 250**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.

Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334

**2.2 Label elements:****CLP Regulation (EC) No 1272/2008:**

Danger

**Hazard statements:**

Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Precautionary statements:**

P261: Avoid breathing vapours.

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

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**Supplementary information:**

EUH212: Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

**Additional Labelling:**

Persons already sensitised to diisocyanates may develop allergic reactions when using this product.

Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

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

**UFI:** WGP7-CJYV-0C00-FP0Y**Additional labeling:**

Read technical data sheet before use. Contains 4,4'-methylenediphenyl diisocyanate, Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate.

**2.3 Other hazards:**

Product fails to meet PBT/vPvB criteria

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

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substance:**






Non-applicable

**3.2 Mixture:**

**Chemical description:** Mixture of substances

**Components:**

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

Identification	Chemical name/Classification	Concentration
CAS: 9002-86-2 EC: Non-applicable Index: Non-applicable REACH: Non-applicable	<b>Polyvinyl chloride</b> <sup>1</sup> Regulation 1272/2008	Not classified 20 - <50 %
CAS: Non-applicable EC: 905-588-0 Index: Non-applicable REACH: 01-2119539452-40-XXXX	<b>Reaction mass of ethylbenzene and xylene</b> <sup>1</sup> Regulation 1272/2008	Self-classified Acute Tox. 4: H312+H332; Asp. Tox. 1: H304; Eye Irrit. 2: H319; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H335 - Danger 
CAS: 1309-37-1 EC: 215-168-2 Index: Non-applicable REACH: 01-2119457614-35-XXXX	<b>Diiron trioxide</b> <sup>1</sup> Regulation 1272/2008	Not classified <5 %
CAS: 13463-67-7 EC: 236-675-5 Index: 022-006-002 REACH: 01-2119489379-17-XXXX	<b>Titanium dioxide</b> <sup>1</sup> Regulation 1272/2008	Not classified <5 %
CAS: 1305-78-8 EC: 215-138-9 Index: Non-applicable REACH: 01-2119475325-36-XXXX	<b>Calcium oxide</b> <sup>1</sup> Regulation 1272/2008	Self-classified Eye Dam. 1: H318; Skin Irrit. 2: H315; STOT SE 3: H335 - Danger 
CAS: Non-applicable EC: 926-141-6 Index: Non-applicable REACH: 01-2119456620-43-XXXX	<b>Hydrocarbons, C11-C14,n-alkanes, isoalkanes, cyclics, &lt;2% aromatics</b> <sup>1</sup> Regulation 1272/2008	Self-classified Asp. Tox. 1: H304; EUH066 - Danger 
CAS: 1308-38-9 EC: 215-160-9 Index: Non-applicable REACH: 01-2119433951-39-XXXX	<b>Chromium (III) oxide</b> <sup>1</sup> Regulation 1272/2008	Not classified <2 %
CAS: 1333-86-4 EC: 215-609-9 Index: Non-applicable REACH: 01-2119384822-32-XXXX	<b>Carbon black</b> <sup>1</sup> Regulation 1272/2008	Not classified <1 %
CAS: 101-68-8 EC: 202-966-0 Index: 615-005-00-9 REACH: 01-2119457014-47-XXXX	<b>4,4'-methylenediphenyl diisocyanate</b> <sup>1</sup> Regulation 1272/2008	ATP CLP00 Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger 
CAS: Non-applicable EC: 915-687-0 Index: Non-applicable REACH: 01-2119491304-40-XXXX	<b>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate</b> <sup>1</sup> Regulation 1272/2008	Self-classified Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Sens. 1A: H317 - Warning 

<sup>1</sup> Voluntarily-listed substance failing to meet any of the criteria set out in Regulation (EU) No. 2020/878

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

**Other information:**

Identification	Specific concentration limit
Reaction mass of ethylbenzene and xylene CAS: Non-applicable EC: 905-588-0	% (w/w) >=10: STOT RE 2 - H373
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	% (w/w) >=5: Skin Irrit. 2 - H315 % (w/w) >=5: Eye Irrit. 2 - H319 % (w/w) >=0,1: Resp. Sens. 1 - H334 % (w/w) >=5: STOT SE 3 - H335

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**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.

**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:**

Product is non-flammable under normal conditions of storage, manipulation and use, but the product contains flammable substances. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

**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:**

Preferably use aspiration for cleaning. Given the danger of the product by inhalation, any cleaning method that involves exposure to the product in this way (sweeping, etc.) is not recommended

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

**For emergency responders:**

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

**6.2 Environmental precautions:**

Avoid spillage into the aquatic environment as it contains substances potentially dangerous for this. Contain the product absorbed in hermetically sealed containers. In the case of serious spillage into the aquatic environment notify the relevant authority.

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

It is recommended:

Preferably use aspiration for cleaning. Given the danger of the product by inhalation, any cleaning method that involves exposure to the product in this way (sweeping, etc.) is not recommended

**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 with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

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

Due to its non-inflammable nature, the product does not present a fire risk under normal conditions of storage, handling and use.

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

Preferably use aspiration for cleaning. Given the danger of the product by inhalation, any cleaning method that involves exposure to the product in this way (sweeping, etc.) is not recommended

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

A.- Technical measures for storage

Minimum Temp.: 5 °C

Maximum Temp.: 30 °C

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)	IOELV (STEL)	
Reaction mass of ethylbenzene and xylene CAS: Non-applicable EC: 905-588-0	50 ppm	221 mg/m <sup>3</sup>	442 mg/m <sup>3</sup>
Calcium oxide CAS: 1305-78-8 EC: 215-138-9	1 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	
Chromium (III) oxide CAS: 1308-38-9 EC: 215-160-9	2 mg/m <sup>3</sup>		

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

Nuisance dust: Inhalable dust 10 mg/m<sup>3</sup> // Respirable dust 4 mg/m<sup>3</sup>

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Reaction mass of ethylbenzene and xylene	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: Non-applicable	Dermal	Non-applicable	Non-applicable	212 mg/kg	Non-applicable
EC: 905-588-0	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>
Calcium oxide	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 1305-78-8	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 215-138-9	Inhalation	Non-applicable	4 mg/m <sup>3</sup>	Non-applicable	1 mg/m <sup>3</sup>
4,4'-methylenediphenyl diisocyanate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 101-68-8	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 202-966-0	Inhalation	Non-applicable	0,1 mg/m <sup>3</sup>	Non-applicable	0,05 mg/m <sup>3</sup>
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: Non-applicable	Dermal	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
EC: 915-687-0	Inhalation	Non-applicable	Non-applicable	0,68 mg/m <sup>3</sup>	Non-applicable

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Reaction mass of ethylbenzene and xylene	Oral	Non-applicable	Non-applicable	12,5 mg/kg	Non-applicable
CAS: Non-applicable	Dermal	Non-applicable	Non-applicable	125 mg/kg	Non-applicable
EC: 905-588-0	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>
Calcium oxide	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 1305-78-8	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 215-138-9	Inhalation	Non-applicable	4 mg/m <sup>3</sup>	Non-applicable	1 mg/m <sup>3</sup>
4,4'-methylenediphenyl diisocyanate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 101-68-8	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 202-966-0	Inhalation	Non-applicable	0,05 mg/m <sup>3</sup>	Non-applicable	0,025 mg/m <sup>3</sup>
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Oral	Non-applicable	Non-applicable	0,05 mg/kg	Non-applicable
CAS: Non-applicable	Dermal	Non-applicable	Non-applicable	0,25 mg/kg	Non-applicable
EC: 915-687-0	Inhalation	Non-applicable	Non-applicable	0,17 mg/m <sup>3</sup>	Non-applicable

**PNEC:**

Identification				
Reaction mass of ethylbenzene and xylene	STP	6,58 mg/L	Fresh water	0,327 mg/L
CAS: Non-applicable	Soil	2,31 mg/kg	Marine water	0,327 mg/L
EC: 905-588-0	Intermittent	0,327 mg/L	Sediment (Fresh water)	12,46 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	12,46 mg/kg
Calcium oxide	STP	2,27 mg/L	Fresh water	0,37 mg/L
CAS: 1305-78-8	Soil	817,4 mg/kg	Marine water	0,24 mg/L
EC: 215-138-9	Intermittent	0,37 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable
4,4'-methylenediphenyl diisocyanate	STP	1 mg/L	Fresh water	1 mg/L
CAS: 101-68-8	Soil	1 mg/kg	Marine water	0,1 mg/L
EC: 202-966-0	Intermittent	10 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable

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


Identification				
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	STP	1 mg/L	Fresh water	0,002 mg/L
CAS: Non-applicable	Soil	0,21 mg/kg	Marine water	0 mg/L
EC: 915-687-0	Intermittent	0,009 mg/L	Sediment (Fresh water)	1,05 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,11 mg/kg

**8.2 Exposure controls:**



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

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more 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		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



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Protective gloves against minor risks			Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2004+A1:2010 and EN ISO 374-1:2016+A1:2018

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
	Work clothing			Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
	Anti-slip work shoes		EN ISO 20347:2012	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007

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

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

**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

**Volatile organic compounds:**

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	7 % weight
V.O.C. density at 20 °C:	Non-applicable
Average carbon number:	8,57
Average molecular weight:	116,43 g/mol

**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:	Solid
Appearance:	Paste
Colour:	According to the markings on the package
Odour:	Characteristic
Odour threshold:	Non-applicable *

**Volatility:**

Boiling point at atmospheric pressure:	137 °C
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	Non-applicable *
Relative density at 20 °C:	1,16
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	>20,5 mm <sup>2</sup> /s
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:	Insoluble in water
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

**Flammability:**

Flash Point:	≥70 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	≥200 °C
Lower flammability limit:	0,6 % Volume

\*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)**

Upper flammability limit:	8 % Volume
<b>Explosive (Solid):</b>	
Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *
<b>Particle characteristics:</b>	
Median equivalent diameter:	Non-applicable *
<b>9.2 Other information:</b>	
<b>Information with regard to physical hazard classes:</b>	
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 *
<b>Other safety characteristics:</b>	
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.

**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.

**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	Precaution	Precaution	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):

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

- 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: 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.

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

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

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

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: 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.

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

- Carcinogenicity: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with carcinogenic effects. For more information see section 3.  
IARC: Polyvinyl chloride (3); Reaction mass of ethylbenzene and xylene (3); Diiron trioxide (3); Titanium dioxide (2B); Chromium (III) oxide (3); Carbon black (2B); 4,4'-methylenediphenyl diisocyanate (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: Prolonged exposure can result in specific respiratory hypersensitivity.
- Skin: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with sensitising effects. For more information see section 3.

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

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

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

- Specific target organ toxicity (STOT)-repeated exposure: 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.
- 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
Polyvinyl chloride CAS: 9002-86-2 EC: Non-applicable	LD50 oral	>2000 mg/kg		
	LD50 dermal	>2000 mg/kg		
	LC50 inhalation	>5 mg/L		
Reaction mass of ethylbenzene and xylene CAS: Non-applicable EC: 905-588-0	LD50 oral	2100 mg/kg		Rat
	LD50 dermal	1100 mg/kg		Rat
	LC50 inhalation	11 mg/L (4 h)		Rat
Diiron trioxide CAS: 1309-37-1 EC: 215-168-2	LD50 oral	10000 mg/kg		Rat
	LD50 dermal	>2000 mg/kg		
	LC50 inhalation	>5 mg/L		

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

Identification		Acute toxicity		Genus
Titanium dioxide CAS: 13463-67-7 EC: 236-675-5	LD50 oral	10000 mg/kg		Rat
	LD50 dermal	10000 mg/kg		Rabbit
	LC50 inhalation	>5 mg/L		
Calcium oxide CAS: 1305-78-8 EC: 215-138-9	LD50 oral	>2000 mg/kg		
	LD50 dermal	>2000 mg/kg		
	LC50 inhalation	>5 mg/L		
Hydrocarbons, C11-C14,n-alkanes, isoalkanes, cyclics, <2% aromatics CAS: Non-applicable EC: 926-141-6	LD50 oral	>2000 mg/kg		
	LD50 dermal	>2000 mg/kg		
	LC50 inhalation	>20 mg/L		
Chromium (III) oxide CAS: 1308-38-9 EC: 215-160-9	LD50 oral	5100 mg/kg		Rat
	LD50 dermal	>2000 mg/kg		
	LC50 inhalation	>5 mg/L		
Carbon black CAS: 1333-86-4 EC: 215-609-9	LD50 oral	>2000 mg/kg		
	LD50 dermal	>2000 mg/kg		
	LC50 inhalation	>5 mg/L		
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	LD50 oral	7616 mg/kg		Rat
	LD50 dermal	10000 mg/kg		Rabbit
	LC50 inhalation	>5 mg/L		
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate CAS: Non-applicable EC: 915-687-0	LD50 oral	3230 mg/kg		Rat
	LD50 dermal	3170 mg/kg		Rabbit
	LC50 inhalation	>20 mg/L		

**11.2 Information on other hazards:**

**Endocrine disrupting properties**

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

**Other information**

Non-applicable

**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:**

Identification		Concentration	Species	Genus
Diiron trioxide CAS: 1309-37-1 EC: 215-168-2	LC50	1000 mg/L (48 h)	Leuciscus idus	Fish
	EC50	Non-applicable		
	EC50	Non-applicable		
Calcium oxide CAS: 1305-78-8 EC: 215-138-9	LC50	1070 mg/L (96 h)	Cyprinus carpio	Fish
	EC50	Non-applicable		
	EC50	Non-applicable		
Carbon black CAS: 1333-86-4 EC: 215-609-9	LC50	1000 mg/L (96 h)	Brachydanio rerio	Fish
	EC50	5600 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
4,4'-methylenediphenyl diisocyanate CAS: 101-68-8 EC: 202-966-0	LC50	1000 mg/L (96 h)	Brachydanio rerio	Fish
	EC50	Non-applicable		
	EC50	Non-applicable		
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate CAS: Non-applicable EC: 915-687-0	LC50	0,9 mg/L (96 h)	Danio rerio	Fish
	EC50	Non-applicable		
	EC50	1,7 mg/L (72 h)	N/A	Algae

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

**Chronic toxicity:**

Identification		Concentration	Species	Genus
Reaction mass of ethylbenzene and xylene	NOEC	1,3 mg/L	Oncorhynchus mykiss	Fish
CAS: Non-applicable EC: 905-588-0	NOEC	1,17 mg/L	Ceriodaphnia dubia	Crustacean
Diiron trioxide	NOEC	10 mg/L	Danio rerio	Fish
CAS: 1309-37-1 EC: 215-168-2	NOEC	20 mg/L	Daphnia magna	Crustacean
Calcium oxide	NOEC	Non-applicable		
CAS: 1305-78-8 EC: 215-138-9	NOEC	32 mg/L	Crangon septemspinosa	Crustacean
4,4'-methylenediphenyl diisocyanate	NOEC	Non-applicable		
CAS: 101-68-8 EC: 202-966-0	NOEC	10 mg/L	Daphnia magna	Crustacean
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	NOEC	Non-applicable		
CAS: Non-applicable EC: 915-687-0	NOEC	1 mg/L	Daphnia magna	Crustacean

**12.2 Persistence and degradability:**

**Substance-specific information:**

Identification	Degradability		Biodegradability	
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	BOD5	Non-applicable	Concentration	20 mg/L
CAS: Non-applicable	COD	Non-applicable	Period	28 days
EC: 915-687-0	BOD5/COD	Non-applicable	% Biodegradable	38 %

**12.3 Bioaccumulative potential:**

**Substance-specific information:**

Identification	Bioaccumulation potential	
Reaction mass of ethylbenzene and xylene	BCF	9
CAS: Non-applicable	Pow Log	2.77
EC: 905-588-0	Potential	Low
4,4'-methylenediphenyl diisocyanate	BCF	150
CAS: 101-68-8	Pow Log	4.51
EC: 202-966-0	Potential	High

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
4,4'-methylenediphenyl diisocyanate	Koc	Non-applicable	Henry	Non-applicable
CAS: 101-68-8	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 202-966-0	Surface tension	2,068E-2 N/m (283,45 °C)	Moist soil	Non-applicable
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Koc	204400	Henry	0E+0 Pa·m <sup>3</sup> /mol
CAS: Non-applicable	Conclusion	Immobile	Dry soil	No
EC: 915-687-0	Surface tension	Non-applicable	Moist soil	No

**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

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

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

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09	Non dangerous

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

Non-applicable

**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:** Non-applicable
- 14.2 **UN proper shipping name:** Non-applicable
- 14.3 **Transport hazard class(es):** Non-applicable  
Labels: Non-applicable
- 14.4 **Packing group:** Non-applicable
- 14.5 **Environmental hazards:** No
- 14.6 **Special precautions for user**  
Special regulations: Non-applicable  
Tunnel restriction code: Non-applicable  
Physico-Chemical properties: see section 9  
Limited quantities: Non-applicable
- 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:** Non-applicable
- 14.2 **UN proper shipping name:** Non-applicable
- 14.3 **Transport hazard class(es):** Non-applicable  
Labels: Non-applicable
- 14.4 **Packing group:** Non-applicable
- 14.5 **Marine pollutant:** No
- 14.6 **Special precautions for user**  
Special regulations: Non-applicable  
EmS Codes:  
Physico-Chemical properties: see section 9  
Limited quantities: Non-applicable  
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 2023:

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

<b>14.1 UN number or ID number:</b>	Non-applicable
<b>14.2 UN proper shipping name:</b>	Non-applicable
<b>14.3 Transport hazard class(es):</b>	Non-applicable
Labels:	Non-applicable
<b>14.4 Packing group:</b>	Non-applicable
<b>14.5 Environmental hazards:</b>	No
<b>14.6 Special precautions for user</b>	
Physico-Chemical properties:	see section 9
<b>14.7 Maritime transport in bulk according to IMO instruments:</b>	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: Calcium oxide (Product-type 2, 3)

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Seveso III:**

Non-applicable

**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)**

Contains more than 0.1 % of 4,4'-methylenediphenyl diisocyanate by weight. This product may not be distributed in its present form for first-time sale to the general public after 27th December 2010 unless the packaging contains protective gloves meeting the provisions of Regulation (EU) 2016/425.

Contains more than 0.1 % of 4,4'-methylenediphenyl diisocyanate 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
- certification or documented proof that training has been successfully completed

(b) intermediate level training, including on-line training, on:

- additional behaviour-based aspects

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

- 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.:**

Non-applicable

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

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**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:**

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

Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled.  
Acute Tox. 4: H332 - Harmful if inhaled.  
Aquatic Acute 1: H400 - Very toxic to aquatic life.  
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.  
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.  
Carc. 2: H351 - Suspected of causing cancer.  
Eye Dam. 1: H318 - Causes serious eye damage.  
Eye Irrit. 2: H319 - Causes serious eye irritation.  
Flam. Liq. 3: H226 - Flammable liquid and vapour.  
Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Skin Irrit. 2: H315 - Causes skin irritation.  
Skin Sens. 1: H317 - May cause an allergic skin reaction.  
Skin Sens. 1A: 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.

**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:**

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

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.

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