RENOLIT ALKORPLUS ADHESIVE 81068

Date of compilation: 15/07/2020 Revised: 04/06/2025 Version: 3 (Replaced 2)

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

1.1 Product identifier: RENOLIT ALKORPLUS ADHESIVE 81068

Other means of identification:

UFI: R800-E0C4-D00M-T5DG

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

Relevant uses (Professional users): Multiuse adhesive
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:

RENOLIT IBÉRICA, S.A.
Ctra. del Montnegre, s/n
08470 Sant Celoni - Barcelona - España
Phone: +34 938484000 - Fax: +34 938675936
renolit.iberica@renolit.com
http://www.renolit.com/

1.4 Emergency telephone number: +44 1235 239 670

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.

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411
Carc. 2: Carcinogenicity, Category 2, H351
Eye Irrit. 2: Eye irritation, Category 2, H319
Flam. Liq. 2: Flammable liquids, Category 2, H225
Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334
Skin Irrit. 2: Skin irritation, Category 2, H315
Skin Sens. 1: Sensitisation, skin, Category 1, H317
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Danger

Hazard statements:

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Carc. 2: H351 - Suspected of causing cancer.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Flam. Liq. 2: H225 - Highly 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.
STOT SE 3: H335 - May cause respiratory irritation.

Precautionary statements:

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SECTION 2: HAZARDS IDENTIFICATION (continued)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261: Avoid breathing vapours
P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTER/doctor if you feel unwell.
P402+P404: Store in a dry place. Store in a closed container.
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.

Additional Labelling:

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

UFI: R800-E0C4-D00M-T5DG

2.3 Other hazards:

Product does not meet PBT/vPvB criteria
Endocrine-disrupting properties: The product does not meet the criteria.
This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS **

3.1 Substance:

Not relevant

3.2 Mixture:

Chemical description: Mixture composed of polymers and resins in solvent

Components:

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

Identification	Chemical name/Classification		Concentration
CAS: 9016-87-9 EC: 618-498-9 Index: Not relevant REACH: Not relevant	**4,4´-methylenediphenyl diisocyanate, isomers and homologues**[1]	Self-classified	10 - <20 %
	Regulation 1272/2008	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: 110-82-7 EC: 203-806-2 Index: 601-017-00-1 REACH: 01-2119463273-41-XXXX	**cyclohexane**[1]	ATP CLP00	5 - <10 %
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Asp. Tox. 1: H304; Flam. Liq. 2: H225; Skin Irrit. 2: H315; STOT SE 3: H336 - Danger	
CAS: 79-20-9 EC: 201-185-2 Index: 607-021-00-X REACH: 01-2119459211-47-XXXX	**methyl acetate**[1]	ATP CLP00	5 - <10 %
	Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	
CAS: 141-78-6 EC: 205-500-4 Index: 607-022-00-5 REACH: 01-2119475103-46-XXXX	**Ethyl acetate**[1]	ATP CLP00	5 - <10 %
	Regulation 1272/2008	Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	

[1] Substances presenting a health or environmental hazard which meet criteria laid down 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
4,4´-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	% (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

*** Changes with regards to the previous version*

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS ** (continued)

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
4,4´-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	LD50 oral	Not relevant	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	11 mg/L	

*** 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.

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:

Not relevant

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC)

Unsuitable extinguishing media:

Water jet

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. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

Additional provisions:

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SECTION 5: FIREFIGHTING MEASURES (continued)

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.

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.
Spillages in water or sea:
Small spillages:
Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.
Large spillages:
If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

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

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SECTION 7: HANDLING AND STORAGE (continued)

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Maximum time: 60 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		
cyclohexane	IOELV (8h)	200 ppm	700 mg/m³
CAS: 110-82-7 EC: 203-806-2	IOELV (STEL)		
Ethyl acetate	IOELV (8h)	200 ppm	734 mg/m³
CAS: 141-78-6 EC: 205-500-4	IOELV (STEL)	400 ppm	1468 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
4,4´-methylenediphenyl diisocyanate, isomers and homologues	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 9016-87-9	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
EC: 618-498-9	Inhalation	Not relevant	0,1 mg/m³	Not relevant	0,05 mg/m³
cyclohexane	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 110-82-7	Dermal	Not relevant	Not relevant	2016 mg/kg	Not relevant
EC: 203-806-2	Inhalation	1400 mg/m³	1400 mg/m³	700 mg/m³	700 mg/m³
methyl acetate	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 79-20-9	Dermal	Not relevant	Not relevant	43 mg/kg	Not relevant
EC: 201-185-2	Inhalation	3777 mg/m³	Not relevant	300 mg/m³	620 mg/m³
Ethyl acetate	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 141-78-6	Dermal	Not relevant	Not relevant	63 mg/kg	Not relevant
EC: 205-500-4	Inhalation	1468 mg/m³	1468 mg/m³	734 mg/m³	734 mg/m³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
4,4´-methylenediphenyl diisocyanate, isomers and homologues	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 9016-87-9	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
EC: 618-498-9	Inhalation	Not relevant	0,05 mg/m³	Not relevant	0,025 mg/m³
cyclohexane	Oral	Not relevant	Not relevant	59,4 mg/kg	Not relevant
CAS: 110-82-7	Dermal	Not relevant	Not relevant	1186 mg/kg	Not relevant
EC: 203-806-2	Inhalation	412 mg/m³	412 mg/m³	206 mg/m³	206 mg/m³

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
methyl acetate	Oral	203 mg/kg	Not relevant	21,5 mg/kg	Not relevant
CAS: 79-20-9	Dermal	203 mg/kg	Not relevant	21,5 mg/kg	Not relevant
EC: 201-185-2	Inhalation	3777 mg/m³	Not relevant	64 mg/m³	133 mg/m³
Ethyl acetate	Oral	Not relevant	Not relevant	4,5 mg/kg	Not relevant
CAS: 141-78-6	Dermal	Not relevant	Not relevant	37 mg/kg	Not relevant
EC: 205-500-4	Inhalation	734 mg/m³	734 mg/m³	367 mg/m³	367 mg/m³

PNEC:

Identification				
4,4´-methylenediphenyl diisocyanate, isomers and homologues	STP	1 mg/L	Fresh water	1 mg/L
CAS: 9016-87-9	Soil	1 mg/kg	Marine water	0,1 mg/L
EC: 618-498-9	Intermittent	10 mg/L	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant
cyclohexane	STP	3,24 mg/L	Fresh water	0,207 mg/L
CAS: 110-82-7	Soil	3,38 mg/kg	Marine water	0,207 mg/L
EC: 203-806-2	Intermittent	0,207 mg/L	Sediment (Fresh water)	16,68 mg/kg
	Oral	Not relevant	Sediment (Marine water)	16,68 mg/kg
Ethyl acetate	STP	650 mg/L	Fresh water	0,24 mg/L
CAS: 141-78-6	Soil	0,148 mg/kg	Marine water	0,024 mg/L
EC: 205-500-4	Intermittent	1,65 mg/L	Sediment (Fresh water)	1,15 mg/kg
	Oral	0,2 g/kg	Sediment (Marine water)	0,115 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 (Filter type: AX)	CE CAT III	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	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm)	CE CAT III	EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

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

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory face protection	Face shield	CE CAT II	EN 166:2002 UNE-EN ISO 18526-1 al 4:2020 UNE-EN ISO 18526-1 al 4:2020 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	CE CAT III	EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2005/A1:2011 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1995	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	CE CAT III	EN ISO 13287:2020 EN ISO 20345:2022 EN 13832-1:2019	Replace boots at any sign of deterioration.

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

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:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

Volatile organic compounds:

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

V.O.C. (Supply):	16 % weight
V.O.C. density at 25 ºC:	Not relevant
Average carbon number:	4,33
Average molecular weight:	82,13 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 ºC:	Liquid
Appearance:	Fluid
Colour:	Light yellow
Odour:	Characteristic
Odour threshold:	Not available *

Volatility:

*Not available 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)

Boiling point at atmospheric pressure:	57 ºC
Vapour pressure at 25 ºC:	Not available *
Vapour pressure at 50 ºC:	Not available *
Evaporation rate at 25 ºC:	Not available *
Product description:	
Density at 25 ºC:	1000 kg/m³
Relative density at 25 ºC:	Not available *
Dynamic viscosity at 25 ºC:	6000 mPa·s
Kinematic viscosity at 25 ºC:	38000 mm²/s
Kinematic viscosity at 40 ºC:	Not available *
Concentration:	Not available *
pH:	Not available *
Vapour density at 25 ºC:	Not available *
Partition coefficient n-octanol/water 25 ºC:	Not available *
Solubility in water at 25 ºC:	Not available *
Solubility properties:	Immiscible
Decomposition temperature:	Not available *
Melting point/freezing point:	Not available *
Flammability:	
Flash Point:	≈-18 ºC
Flammability (solid, gas):	Not available *
Autoignition temperature:	260 ºC
Lower flammability limit:	Not available *
Upper flammability limit:	Not available *
Particle characteristics:	
Median equivalent diameter:	Not available *

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Not available *
Oxidising properties:	Not available *
Corrosive to metals:	Not available *
Heat of combustion:	Not available *
Aerosols-total percentage (by mass) of flammable components:	Not available *
Other safety characteristics:	
Surface tension at 25 ºC:	Not available *
Refraction index:	Not available *

*Not available 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 from Safety Data Sheet.

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SECTION 10: STABILITY AND REACTIVITY (continued)

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	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_2), 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 : 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: 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: Produces eye damage after contact.

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

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
  IARC: 4,4´-methylenediphenyl diisocyanate, isomers and homologues (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: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

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

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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

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:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
cyclohexane CAS: 110-82-7 EC: 203-806-2	LD50 oral	5100 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation		
	LC50 inhalation vapour		
methyl acetate CAS: 79-20-9 EC: 201-185-2	LD50 oral	6482 mg/kg	Rat
	LD50 dermal	18684 mg/kg	Guinean pig
	LC50 inhalation vapour	75 mg/L (4 h)	Rabbit
Ethyl acetate CAS: 141-78-6 EC: 205-500-4	LD50 oral	4100 mg/kg	Rat
	LD50 dermal	20000 mg/kg	Rabbit
	LC50 inhalation		
	LC50 inhalation vapour		
4,4´-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: 618-498-9	LD50 oral		
	LD50 dermal		
	LC50 inhalation vapour	11 mg/L	

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product does not meet the criteria.

Other information

Not relevant

SECTION 12: ECOLOGICAL INFORMATION

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

Toxic to aquatic life with long lasting effects.

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
cyclohexane	LC50	>0.1 - 1 mg/L (96 h)		Fish
CAS: 110-82-7	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
EC: 203-806-2	EC50	>0.1 - 1 mg/L (72 h)		Algae
methyl acetate	LC50	320 mg/L (96 h)	Pimephales promelas	Fish
CAS: 79-20-9	EC50	1026,7 mg/L (48 h)	Daphnia magna	Crustacean
EC: 201-185-2	EC50	120 mg/L (72 h)	Scenedesmus subspicatus	Algae

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration		Species	Genus
Ethyl acetate	LC50	230 mg/L (96 h)	Pimephales promelas	Fish
CAS: 141-78-6	EC50	717 mg/L (48 h)	Daphnia magna	Crustacean
EC: 205-500-4	EC50	3300 mg/L (48 h)	Scenedesmus subspicatus	Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
Ethyl acetate	NOEC	9,65 mg/L	Pimephales promelas	Fish
CAS: 141-78-6 EC: 205-500-4	NOEC	2,4 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
cyclohexane	BOD5	Not relevant	Concentration	100 mg/L
CAS: 110-82-7	COD	Not relevant	Period	28 days
EC: 203-806-2	BOD5/COD	Not relevant	% Biodegradable	0 %
methyl acetate	BOD5	Not relevant	Concentration	100 mg/L
CAS: 79-20-9	COD	Not relevant	Period	14 days
EC: 201-185-2	BOD5/COD	Not relevant	% Biodegradable	92 %
Ethyl acetate	BOD5	1,36 g O2/g	Concentration	100 mg/L
CAS: 141-78-6	COD	1,69 g O2/g	Period	14 days
EC: 205-500-4	BOD5/COD	0,8	% Biodegradable	83 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
cyclohexane	BCF	66
CAS: 110-82-7	Pow Log	3.44
EC: 203-806-2	Potential	Moderate
methyl acetate	BCF	0.8
CAS: 79-20-9	Pow Log	0.18
EC: 201-185-2	Potential	Low
Ethyl acetate	BCF	30
CAS: 141-78-6	Pow Log	0.73
EC: 205-500-4	Potential	Moderate

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
cyclohexane	Koc	Not relevant	Henry	Not relevant
CAS: 110-82-7	Conclusion	Not relevant	Dry soil	Not relevant
EC: 203-806-2	Surface tension	2,465E-2 N/m (25 ºC)	Moist soil	Not relevant
methyl acetate	Koc	Not relevant	Henry	Not relevant
CAS: 79-20-9	Conclusion	Not relevant	Dry soil	Not relevant
EC: 201-185-2	Surface tension	2,454E-2 N/m (25 ºC)	Moist soil	Not relevant
Ethyl acetate	Koc	59	Henry	13,58 Pa·m³/mol
CAS: 141-78-6	Conclusion	Very High	Dry soil	Yes
EC: 205-500-4	Surface tension	2,324E-2 N/m (25 ºC)	Moist soil	Yes

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

12.7 Other adverse effects:

- CONTINUED ON NEXT PAGE -

SECTION 12: ECOLOGICAL INFORMATION (continued)

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances	Hazardous

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

HP3 Flammable, HP14 Ecotoxic, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP7 Carcinogenic, 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-hazardous 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 2023 and RID 2023:

14.1	**UN number or ID number:**	UN1133
14.2	**UN proper shipping name:**	ADHESIVES
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group:**	III
14.5	**Environmental hazards:**	Yes
14.6	**Special precautions for user**	
	Special regulations:	Not relevant
	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:**	Not relevant

Transport of dangerous goods by sea:

With regard to IMDG 41-22:

*** Changes with regards to the previous version*

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SECTION 14: TRANSPORT INFORMATION ** (continued)

14.1	**UN number or ID number:**	UN1133
14.2	**UN proper shipping name:**	ADHESIVES
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group:**	III
14.5	**Marine pollutant:**	Yes
14.6	**Special precautions for user**	
	Special regulations:	955, 223
	EmS Codes:	F-E, S-D
	Physico-Chemical properties:	see section 9
	Limited quantities:	5 L
	Segregation group:	Not relevant
14.7	**Maritime transport in bulk according to IMO instruments:**	Not relevant

Transport of dangerous goods by air:

With regard to IATA/ICAO 2025:

14.1	**UN number or ID number:**	UN1133
14.2	**UN proper shipping name:**	ADHESIVES
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group:**	III
14.5	**Environmental hazards:**	Yes
14.6	**Special precautions for user**	
	Physico-Chemical properties:	see section 9
14.7	**Maritime transport in bulk according to IMO instruments:**	Not relevant

Other information:

The product is, based on the viscosity, classified in accordance with ADR, Part 2, Chapter 2.2, Paragraph 2.2.3.1.4

*** Changes with regards to the previous version*

SECTION 15: REGULATORY INFORMATION

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

- Article 95, REGULATION (EU) No 528/2012: Not relevant
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- Regulation (EU) 2019/1021 on persistent organic pollutants: Not relevant
- Regulation (EU) No 2024/590, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c	FLAMMABLE LIQUIDS	5000	50000
E2	ENVIRONMENTAL HAZARDS	200	500

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

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 4,4´-methylenediphenyl diisocyanate, isomers and homologues 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 diisocyanates 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:

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SECTION 15: REGULATORY INFORMATION (continued)

(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
— maintenance
— management of change
— evaluation of existing safety instructions
— risk in relation to application process used

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SECTION 15: REGULATORY INFORMATION (continued)

— 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.:

COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3):
· Removed substances
tris(nonylphenyl) phosphite (26523-78-4)
TRANSPORT INFORMATION (SECTION 14):
· Packing group

Texts of the legislative phrases mentioned in section 2:

H225: Highly flammable liquid and vapour.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317: May cause an allergic skin reaction.
H351: Suspected of causing cancer.
H335: May cause respiratory irritation.
H411: Toxic to aquatic life with long lasting effects.

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: 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 Irrit. 2: H319 - Causes serious eye irritation.
Flam. Liq. 2: H225 - Highly 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.
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.

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.

- END OF SAFETY DATA SHEET -