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

1.1 Product identifier: EFFISUS PRIMER RED+

Other means of identification:

UFI: 1J10-F06W-M006-RAD8

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

Relevant uses (Professional users): Primer.
Relevant uses (Industrial user): Primer.
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:

Effisus, Unipessoal Lda
Travessa José de Oliveira Mendes, 87 & 103
4760-912 Vila Nova de Famalicão - Porto - Portugal
Phone: +351252085574 - Fax: +351252081644
geral@effisus.com
www.effisus.com

1.4 Emergency telephone number: 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. Aquatic

Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411
Asp. Tox. 1: Aspiration hazard, Category 1, H304
Flam. Liq. 2: Flammable liquids, Category 2, H225
Repr. 2: Reproductive toxicity, Category 2, H361d
Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334
Skin Irrit. 2: Skin irritation, Category 2, H315
STOT RE 2: Specific target organ toxicity — Repeated exposure, Hazard Category 2 (Inhalation), H373 STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336

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. Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.
Flam. Liq. 2: H225 - Highly flammable liquid and vapour. Repr. 2: H361d - Suspected of damaging the unborn child.
Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled. Skin Irrit. 2: H315 - Causes skin irritation.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Inhalation). STOT SE 3: H336 - May cause drowsiness or dizziness.

Precautionary statements:

- CONTINUED ON NEXT PAGE -

SECTION 2: HAZARDS IDENTIFICATION (continued)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260: Do not breathe mist or vapours.
P273: Avoid release to the environment.
P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P331: Do NOT induce vomiting.
P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P370+P378: In case of fire: Use Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC) to extinguish.
P391: Collect spillage.
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.

As of August 24, 2023, adequate training is required prior to industrial or professional use.

UFI: 1J10-F06W-M006-RAD8

Substances contributing to classification:
Toluene (CAS: 108-88-3), Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (CAS: 64742-49-0), Diphenylmethane diisocyanate (CAS: 9016-87-9)

2.3 Other hazards:

The mixture does not contain components considered persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
The mixture does not contain components considered to have endocrine disrupting properties in accordance with Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Not relevant

3.2 Mixture:

Chemical description: Mixture composed of polymers 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: 108-88-3 EC: 203-625-9 Index: 601-021-00-3 REACH: 01-2119471310-51-XXXX	**Toluene**[1]		Self-classified	30 - <50%
	Regulation 1272/2008	Aquatic Chronic 3: H412; Asp. Tox. 1: H304; Flam. Liq. 2: H225; Repr. 2: H361d; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H336 - Danger		
CAS: 64742-49-0 EC: 927-510-4 Index: Not relevant REACH: 01-2119475515-33-XXXX	**Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics**[1]		Self-classified	30 - <50%
	Regulation 1272/2008	Aquatic Chronic 2: H411; Asp. Tox. 1: H304; Flam. Liq. 2: H225; Skin Irrit. 2: H315; STOT SE 3: H336 - Danger		
CAS: 9016-87-9 EC: Not relevant Index: Not relevant REACH: Not relevant	**Diphenylmethanediisocyanate**[1]		Auto-classified	0.1 - <1%
	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		

[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.

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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. Symptoms of poisoning may occur even after several hours; therefore, medical observation for at least 48 hours after the accident is recommended.

By inhalation:

Remove the affected person from the area of exposure, provide them with fresh air, and keep them at rest. In severe cases such as cardiorespiratory arrest, administer artificial respiration techniques if properly trained (CPR, oxygen provision, etc.) and seek 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 lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

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), Water mist

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:

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.

- CONTINUED ON NEXT PAGE -

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

PREGNANT WOMEN SHOULD NOT BE EXPOSED TO THIS PRODUCT. Transfer in designated areas that comply with the necessary safety conditions (emergency showers and eyewash stations in close proximity), using personal protection equipment, especially on the hands and face (See section 8). Limit manual transfers to small amounts only. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

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.

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SECTION 7: HANDLING AND STORAGE (continued)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Store in a cool, dark, dry, well-ventilated location B.-

General conditions for storage

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

Other information:

Keep containers tightly closed in a dry, cool, and well-ventilated place. Store in a cool place. Heat will increase pressure and may cause the container to explode.

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		
Toluene [(1)]	IOELV (8h)	50 ppm	192 mg/m³
CAS: 108-88-3 EC: 203-625-9	IOELV (STEL)	100 ppm	384 mg/m³

[(1)] Skin

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Toluene	Oral	Not relevant	Not relevant	Not relevant	Not relevant
CAS: 108-88-3	Dermal	Not relevant	Not relevant	384 mg/kg	Not relevant
EC: 203-625-9	Inhalation	384 mg/m³	384 mg/m³	192 mg/m³	192 mg/m³

PNEC:

Identification				
Toluene	STP	0,84 mg/L	Fresh water	74 µg/L
CAS: 108-88-3	Soil	0,313 mg/kg	Marine water	7,4 µg/L
EC: 203-625-9	Intermittent	Not relevant	Sediment (Fresh water)	1,78 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0,178 mg/kg

8.2 Exposure controls:

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

In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have CE marking in accordance with Directive 2016/425/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1.
All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	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.

- CONTINUED ON NEXT PAGE -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

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.

For permanent contact gloves made of the following materials are suitable:
- If longer exposure to the chemical preparation is necessary, a glove resistant to mechanical stress is recommended in combination with the Barrier 02-100 underglove from Ansell or other suppliers (penetration time: 480 min).
- For permanent contact of up to 15 minutes, gloves made from the following materials are suitable: Butyl rubber (minimum thickness: 0.7 mm; penetration time: 15 min).
- As protection against splashes, gloves made from the following materials are suitable: Nitrile (minimum thickness of 0.12 mm), disposable gloves with long cuffs.

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	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):	85,07 % weight
V.O.C. density at 20 ºC:	672,1 kg/m³ (672,1 g/L)
Average carbon number:	7
Average molecular weight:	96,07 g/mol

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties: For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Not relevant *
Colour:	Red
Odour:	Solvent
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	Not relevant *
Vapour pressure at 20 °C:	Not relevant *
Vapour pressure at 50 °C:	Not relevant *
Evaporation rate at 20 °C:	Not relevant *

Product description:

Density at 20 °C:	0,79 g/cm³
Relative density at 20 °C:	Not relevant *
Dynamic viscosity at 20 °C:	125 mPa·s
Kinematic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 40 °C:	Not relevant *
Concentration:	Not relevant *
pH:	Not relevant *
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Immiscible or difficult to mix
Decomposition temperature:	Not applicable
Melting point/freezing point:	Not relevant *

Flammability:

Flash Point:	-18 °C
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	Not relevant *
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *

Particle characteristics:

Median equivalent diameter:	Not relevant *

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	The product is not explosive. However, explosive vapor/air mixtures may form.
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *

Other safety characteristics:

Surface tension at 20 °C:	Not relevant *
Refraction index:	Not relevant *

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

- CONTINUED ON NEXT PAGE -

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.

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.

Develops highly flammable vapors/fumes.

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:

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: 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: Produces skin inflammation.
- 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: Toluene (3); Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics (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: Suspected of damaging the unborn child.

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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:

Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.

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

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

H- Aspiration hazard:

May be fatal if swallowed and enters airways.

Other information:

Not relevant

Product-specific toxicological information:

Acute toxicity		Genus
LC50 inhalation dust / mist	>5 mg/L (4 h)	

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Toluene CAS: 108-88-3 EC: 203-625-9	LD50 oral	5580 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation gases	12,5 mg/L	Rat
Diphenylmethanediisocyanate CAS: 9016-87-9 EC: Not relevant	LC50 inhalation dust	1,5 mg/L (4 h)	
	LC50 inhalation mist	1,5 mg/L (4 h)	

Acute Toxicity Estimate (ATE mix):

	ATE mix	Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (Calculation method)	0 %
Dermal	>2000 mg/kg (Calculation method)	0 %
LC50 inhalation vapour	>20 mg/L (4 h) (Calculation method)	0 %

11.2 Information on other hazards:

Endocrine disrupting properties

The mixture does not contain components considered to have endocrine disrupting properties in accordance with Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other information

Not relevant

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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:

Data not available

12.2 Persistence and degradability:

Data not available

12.3 Bioaccumulative potential:

Not relevant

12.4 Mobility in soil:

Environment: Soils. Remarks: Do not allow the product to reach groundwater, water bodies, or sewage systems.

12.5 Results of PBT and vPvB assessment:

The mixture does not contain components considered persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties:

The mixture does not contain components considered to have endocrine disrupting properties in accordance with Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects:

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
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09	

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

HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP14 Ecotoxic, HP10 Toxic for reproduction, 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.
If section 3 of this safety data sheet includes organic solvents or other hazardous substances, the waste from them must be classified as hazardous (*).
Waste from cleaning:
08 04 11* Sludges from adhesives and sealants containing organic solvents or other dangerous substances 08 04 12* Sludges from adhesives and sealants other than those mentioned in 08 04 11
Dirty packaging waste:
15 01 10* Packaging containing residues of hazardous substances or contaminated with hazardous substances. Clean packaging waste:
15 01 01 Paper and cardboard packaging
15 01 02 Plastic packaging
15 01 04 Metal packaging

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

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SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR and RID:

14.1	**UN number or ID number:**	UN1993
14.2	**UN proper shipping name:**	FLAMMABLE LIQUID, N.O.S. (Toluene; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group:**	II
14.5	**Environmental hazards:**	Yes
14.6	**Special precautions for user**	
	Special regulations:	274, 601
	Tunnel restriction code:	D/E
	Physico-Chemical properties:	see section 9
	Limited quantities:	1 L
	Exempted quantities:	E2
	Hazard identification number (Kemler code):	33
	Transport category:	2
14.7	**Maritime transport in bulk according to IMO instruments:**	Not relevant

Transport of dangerous goods by sea:

With regard to IMDG:

14.1	**UN number or ID number:**	UN1993
14.2	**UN proper shipping name:**	FLAMMABLE LIQUID, N.O.S. (Toluene; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group:**	II
14.5	**Marine pollutant:**	Yes
14.6	**Special precautions for user**	
	Special regulations:	274
	EmS Codes:	F-E, S-E
	Physico-Chemical properties:	see section 9
	Limited quantities:	1 L
	Segregation group:	Not relevant
	Exempted quantities:	E2
14.7	**Maritime transport in bulk according to IMO instruments:**	Not relevant

Transport of dangerous goods by air:

With regard to IATA/ICAO:

14.1	**UN number or ID number:**	UN1993
14.2	**UN proper shipping name:**	FLAMMABLE LIQUID, N.O.S. (Toluene; Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics)
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group:**	II
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

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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):
Phenol, 4-nonyl-, branched (CAS: 84852-15-3)
- **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:
Phenol, 4-nonyl-, branched (CAS: 84852-15-3)
- 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 ....):

Entry 3: 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. Entry 48: Contains more than 0.1 % of Toluene by weight. Shall not be placed on the market, or used, as a substance or in mixtures in a concentration equal to or greater than 0,1 % by weight where the substance or mixture is used in adhesives or spray paints intended for supply to the general public.
Entry 57: 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.

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SECTION 15: REGULATORY INFORMATION (continued)

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;
— 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.

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (**RoHS**): Not relevant

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

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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.:
Not relevant

Texts of the legislative phrases mentioned in section 2:

H225: Highly flammable liquid and vapour.
H315: Causes skin irritation.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336: May cause drowsiness or dizziness.
H304: May be fatal if swallowed and enters airways.
H411: Toxic to aquatic life with long lasting effects.
H361d: Suspected of damaging the unborn child.
H373: May cause damage to organs through prolonged or repeated exposure (Inhalation).

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

CLP Regulation (EC) No 1272/2008:
Acute Tox. 4: H332 - Harmful if inhaled.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Aquatic Chronic 3: H412 - Harmful 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.
Repr. 2: H361d - Suspected of damaging the unborn child.
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 (Inhalation).
STOT SE 3: H335 - May cause respiratory irritation.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:
Flam. Liq. 2: Calculation method (2.6.4.3)
Skin Irrit. 2: Calculation method
Resp. Sens. 1: Calculation method
STOT SE 3: Calculation method Asp.
Tox. 1: Calculation method
Aquatic Chronic 2: Calculation method
Repr. 2: Calculation method
STOT RE 2: Calculation method

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

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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 -