

Safety Data Sheet according to (EC) No 1907/2006 as amended

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TEROSON PU 9500 AE

SDS No. : 237394 V017.3 Revision: 13.12.2023 printing date: 18.12.2023 Replaces version from: 25.01.2023

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

1.1. Product identifier TEROSON PU 9500 AE

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

Filling and isolation foam

1.3. Details of the supplier of the safety data sheet Henkel AG & Co. KGaA Henkelstr. 67

40589 Düsseldorf

Germany

Phone: +49 211 797 0

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website https://mysds.henkel.com/index.html#/appSelection or www.henkel-adhesives.com.

1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Aerosol	Category 1
H222 Extremely flammable aerosol.	
H229 Pressurized container: May burst if heated.	
Acute toxicity	Category 4
H332 Harmful if inhaled.	
Route of Exposure: Inhalation	
Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Respiratory sensitizer	Category 1
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Carcinogenicity	Category 2
H351 Suspected of causing cancer.	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	
Target organ: respiratory tract irritation	
Specific target organ toxicity - repeated exposure	Category 2
H373 May cause damage to organs through prolonged or repeated exposure.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram: Contains 1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, 1-[2-(2-hydroxyethoxy)ethyl] 2-(2hydroxypropyl) ester, polymers wit Diphenylmethane diisocyanate, isomers and homologues Signal word: Danger Hazard statement: H222 Extremely flammable aerosol. H229 Pressurized container: May burst if heated. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.

Supplemental information	As from 24 August 2023 adequate training is required before industrial or professional use. Further information: https://www.feica.eu/PUinfo
Precautionary statement:	 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
Prevention	No smoking. P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. P260 Do not breathe spray. P280 Wear protective gloves/eye protection.
Precautionary statement:	P308+P313 IF exposed or concerned: Get medical advice/attention.
Response	P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
Precautionary statement: Storage	P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50.DEGREE.C/122.DEGREE.F.

2.3. Other hazards

Solvents contained in the product evaporate during processing and their vapors can form explosive/highly inflammable air/vapor mixtures.

The solvent vapors are heavier than air and may collect in high concentrations at floor level.

The aerosol container is under pressure. Do not expose to high temperatures.

Following substances are present in a concentration \geq the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration \geq the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M- factors and ATEs	Add. Information
1,2-Benzenedicarboxylic acid, 3, 4,5,6-tetrabromo-, 1-[2-(2- hydroxyethoxy)ethyl] 2-(2- hydroxypropyl) ester, polymers wit 2639874-15-8	40- 60 %	Acute Tox. 4, Inhalation, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Resp. Sens. 1, H334 STOT SE 3, H335 Carc. 2, H351 STOT RE 2, H373		
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4 01-2119486772-26	10- 20 %	Acute Tox. 4, Oral, H302 Aquatic Chronic 3, H412		
Isobutane 75-28-5 200-857-2 01-2119485395-27	5- < 10 %	Flam. Gas 1A, H220 Press. Gas Liquef. Gas, H280		
dimethyl ether 115-10-6 204-065-8 01-2119472128-37	5- < 10 %	Flam. Gas 1A, H220 Press. Gas Liquef. Gas, H280		EU OEL
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	2,5- < 5 %	Carc. 2, H351 Acute Tox. 4, Inhalation, H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317	Eye Irrit. 2; H319; C >= 5 % Skin Irrit. 2; H315; C >= 5 % Resp. Sens. 1; H334; C >= 0,1 % STOT SE 3; H335; C >= 5 % ====== inhalation:ATE = 1,5 mg/l;dust/mist	
Ethane-1,2-diol 107-21-1 203-473-3 01-2119456816-28	2,5-< 5 %	Acute Tox. 4, Oral, H302 STOT RE 2, Oral, H373	oral:ATE = 500 mg/kg	EU OEL
Propane 74-98-6 200-827-9 01-2119486944-21	2,5-< 5 %	Flam. Gas 1A, H220 Press. Gas H280		

If no ATE values are displayed, please refer to LD/LC50 values in Section 11. For full text of the H - statements and other abbreviations see section 16 "Other information".

The hazard classification of this product is based solely on the mixture present within the aerosol, excluding the propellant gases. The information provided in Section 3 is based on the combination of the mixture and propellant gases.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

Symptoms of poisoning may occur even after several hours, continue medical observation for at least 48 hours after the accident.

Inhalation:

Fresh air, oxygen supply, warmth; seek specialist medical attention. Delayed effects possible after inhalation.

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Skin contact:

IF ON SKIN: Wash with plenty of soap and water. In case of adverse health effects seek medical advice.

Eye contact:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion: not relevant.

4.2. Most important symptoms and effects, both acute and delayed SKIN: Rash, Urticaria.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

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

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

4.3. Indication of any immediate medical attention and special treatment needed See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons: Water jet (solvent-containing product).

5.2. Special hazards arising from the substance or mixture In case of fire toxic gases can be released.

5.3. Advice for firefighters Wear self-contained breathing apparatus. Wear protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Avoid contact with skin and eyes. Keep unprotected persons away. Danger of slipping on spilled product.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid open flames and sources of ignition. Use only non-sparking tools. Use explosion proof electric equipment. Ground/bond container and receiving equipment. Take precautionary measures against static discharge.

Hygiene measures:

Do not eat, drink or smoke while working. Wash hands before work breaks and after finishing work. Take off contaminated clothing and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction. Store in sealed original container protected against moisture. Store in a cool, frost-free place. Store in a cool, well-ventilated place. Storage at 15 to 25°C is recommended. Keep away from heat and direct sunlight.

7.3. Specific end use(s)

Filling and isolation foam

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for

Germany

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Dimethyl ether 115-10-6 [DIMETHYLETHER]	1.000	1.920	Time Weighted Average (TWA):	Indicative	ECTLV
Dimethyl ether 115-10-6	1.000	1.900	Exposure limit(s):	8	TRGS 900
Dimethyl ether 115-10-6			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Isobutane 75-28-5			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Isobutane 75-28-5	1.000	2.400	Exposure limit(s):	4	TRGS 900
Diphenylmethane diisocyanate, isomers and homologs 9016-87-9			STEL (Short Term Exposure Limit) factor:	1 Substance listed with both Peak factor and STEL factor. The Peak factor is supplied with the AGW values.	TRGS 900
Diphenylmethane diisocyanate, isomers and homologs 9016-87-9			Skin designation:	Can be absorbed through the skin.	TRGS 900
Diphenylmethane diisocyanate, isomers and homologs 9016-87-9			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Diphenylmethane diisocyanate, isomers and homologs 9016-87-9		0,05	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Ethane-1,2-diol 107-21-1 [ETHYLENE GLYCOL]	40	104	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Ethane-1,2-diol 107-21-1 [ETHYLENE GLYCOL]	20	52	Time Weighted Average (TWA):	Indicative	ECTLV
Ethane-1,2-diol 107-21-1			Skin designation:	Can be absorbed through the skin.	TRGS 900
Ethane-1,2-diol 107-21-1			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Ethane-1,2-diol 107-21-1	10	26	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Propane 74-98-6	1.000	1.800	Exposure limit(s):	4	TRGS 900
Propane 74-98-6			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Polyethylene gycol 25322-68-3			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Polyethylene gycol 25322-68-3		1.000	Exposure limit(s):	8 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see	TRGS 900

			Number 2.7).	
Polyethylene gycol	200	Exposure limit(s):	2	TRGS 900
25322-68-3		-	If the AGW and BGW values	
			are complied with, there	
			should be no risk of	
			reproductive damage (see	
			Number 2.7).	

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value			Remarks	
	1	Î.	mg/l	ppm	mg/kg	others	
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	aqua (marine water)		0,032 mg/l				
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	oral				11,6 mg/kg		
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	Soil				0,34 mg/kg		
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	sediment (marine water)				1,15 mg/kg		
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	Sewage treatment plant		19,1 mg/l				
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	aqua (freshwater)		0,32 mg/l				
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	sediment (freshwater)				11,5 mg/kg		
Dimethyl ether 115-10-6	aqua (freshwater)		0,155 mg/l				
Dimethyl ether 115-10-6	sediment (freshwater)				0,681 mg/kg		
Dimethyl ether 115-10-6	Soil				0,045 mg/kg		
Dimethyl ether 115-10-6	sewage treatment plant (STP)		160 mg/l				
Dimethyl ether 115-10-6	aqua (marine water)		0,016 mg/l				
Dimethyl ether 115-10-6	aqua (intermittent releases)		1,549 mg/l				
Dimethyl ether 115-10-6	sediment (marine water)				0,069 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	Workers	inhalation	Long term exposure - systemic effects		8,2 mg/m3	
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	Workers	inhalation	Acute/short term exposure - systemic effects		22,6 mg/m3	
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	Workers	dermal	Long term exposure - systemic effects		2,91 mg/kg	
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	General population	inhalation	Long term exposure - systemic effects		1,45 mg/m3	
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	General population	inhalation	Acute/short term exposure - systemic effects		5,6 mg/m3	
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	General population	dermal	Long term exposure - systemic effects		1,04 mg/kg	
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	General population	oral	Long term exposure - systemic effects		0,52 mg/kg	
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	General population	oral	Acute/short term exposure - systemic effects		2 mg/kg	
Ethane-1,2-diol 107-21-1	Workers	dermal	Long term exposure - systemic effects		106 mg/kg	
Ethane-1,2-diol 107-21-1	Workers	inhalation	Long term exposure - local effects		35 mg/m3	
Ethane-1,2-diol 107-21-1	General population	dermal	Long term exposure - systemic effects		53 mg/kg	
Ethane-1,2-diol 107-21-1	General population	inhalation	Long term exposure - local effects		7 mg/m3	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

In case of aerosol forming ensure sufficient suction and ventilation.

Respiratory protection:

In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter (EN 14387).

This recommendation should be matched to local conditions.

Eye protection: Goggles which can be tightly sealed. Protective eye equipment should conform to EN166.

Skin protection: Wear protective equipment. Protective clothing that covers arms and legs. Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts. Advices to personal protection equipment:

Use only personal protection that's CE-labelled according to Directive 89/686/EEC (Europe) or to Regulation No. 819 of 19 August 1994 (Norway), or equivalent.

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Delivery form	aerosol
Colour	silver, grey
Odor	ether-like
Physical state	aerosol
Melting point	Not applicable, Product is a liquid
Solidification temperature	Not available.
Initial boiling point	Not applicable, Determination technically not possible
Flammability	Extremely flammable aerosol.
Explosive limits	,
lower	1,5 %(V);
upper	26 %(V);
	Values referring to propellant
Flash point	Not applicable to aerosols.
Auto-ignition temperature	> 225 °C (> 437 °F) Values referring to propellant
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic
	peroxide and does not decompose under foreseen conditions of use
pH	Not applicable, Product reacts with water.
Viscosity (kinematic)	Not available.
Viscosity, dynamic	Not available.
0	
Solubility (qualitative)	Partially miscible
(20 °C (68 °F); Solvent: Water)	•
Partition coefficient: n-octanol/water	Not applicable
	Mixture
Vapour pressure	7500 mbar
(55 °C (131 °F))	
Vapour pressure	5500 - 6000 mbar
Vapour pressure	5100 hPa
(20 °C (68 °F))	
Density	1,05 g/cm3 no method / method unknown
(23 °C (73.4 °F))	
Relative vapour density:	1,6
(20 °C)	
Particle characteristics	Not applicable
	Product is a liquid
2. Other information	

9.2.1. Information with regard to physical hazard classes Aerosols:

Classified as Aerosol category 1 because it contains more than 1 % (by mass) flammable components or has a heat of combustion of at least 20 kJ/g and is not submitted to the flammability classification procedures

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with water, alcohols, amines. Reacts with water: Pressure built up in closed vessel (CO2). Oxidizers.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Humidity Temperatures over appr. 50 °C Heat, flames, sparks and other sources of ignition.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

At higher temperatures isocyanate may be released. Carbon dioxide is generated under contact with moisture, leading to pressure in the cans. Danger of cans bursting!

SECTION 11: Toxicological information

General toxicological information:

An allergic reaction cannot be excluded after repeated skin contact.

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, 1-[2-(2-hydroxyethoxy) ethyl] 2-(2- hydroxypropyl) ester, polymers wit 2639874-15-8	LD50	> 10.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	LD50	632 mg/kg	rat	EU Method B.1 (Acute Toxicity (Oral))
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	LD50	> 2.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Ethane-1,2-diol 107-21-1	Acute toxicity estimate (ATE)	500 mg/kg		Expert judgement

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances	Value	Value	Species	Method
CAS-No.	type			
1,2-Benzenedicarboxylic	LD50	> 9.400 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
acid, 3,4,5,6-tetrabromo-,				
1-[2-(2-hydroxyethoxy)				
ethyl] 2-(2-				
hydroxypropyl) ester,				
polymers wit				
2639874-15-8				
Phosphoric trichloride,	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
reaction products with				
propylene oxide				
1244733-77-4				
Diphenylmethane	LD50	> 9.400 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
diisocyanate, isomers and				
homologues				
9016-87-9				
Ethane-1,2-diol	LD50	10.600 mg/kg	rabbit	not specified
107-21-1				

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, 1-[2-(2-hydroxyethoxy) ethyl] 2-(2- hydroxypropyl) ester, polymers wit 2639874-15-8	LC50	1,5 mg/l	dust/mist	4 h	rat	Expert judgement
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	LC50	> 7 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
Isobutane 75-28-5	LC50	260200 ppm	gas	4 h	mouse	not specified
dimethyl ether 115-10-6	LC50	164000 ppm	gas	4 h	rat	not specified
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	Acute toxicity estimate (ATE)	1,5 mg/l	dust/mist	4 h		Expert judgement
Propane 74-98-6	LC50	> 800000 ppm	gas	15 min	rat	not specified

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Ethane-1,2-diol 107-21-1	not irritating	20 h	rabbit	BASF Test

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	irritating		human	Weight of evidence
Ethane-1,2-diol 107-21-1	not irritating		rabbit	BASF Test

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	sensitising	Skin sensitisation	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Ethane-1,2-diol 107-21-1	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	positive	mammalian cell gene mutation assay	with		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Isobutane 75-28-5	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Isobutane 75-28-5	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
dimethyl ether 115-10-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
dimethyl ether 115-10-6	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
dimethyl ether 115-10-6	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)
Ethane-1,2-diol 107-21-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Propane 74-98-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Propane 74-98-6	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	negative	oral: gavage		rat	not specified
Isobutane 75-28-5	negative	oral: feed		Drosophila melanogaster	not specified
Isobutane 75-28-5	negative	inhalation: gas		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
dimethyl ether 115-10-6	negative	inhalation: gas		Drosophila melanogaster	equivalent or similar to OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Dros. melanog.)
Ethane-1,2-diol 107-21-1	negative	oral: feed		rat	Chromosome Aberration Test
Propane 74-98-6	negative			Drosophila melanogaster	not specified
Propane 74-98-6	negative	inhalation: gas		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
dimethyl ether 115-10-6	not carcinogenic	inhalation	2 y 6 h/d, 5 d/w	rat	male/female	equivalent or similar OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	NOAEL P ca. 85 mg/kg	Two generation study	oral: feed	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
Isobutane 75-28-5	NOAEL P 21,4 mg/l NOAEL F1 21,4 mg/l	screening	inhalation: gas	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
dimethyl ether 115-10-6	NOAEL P 2.5 %	other	inhalation: gas	rat	other guideline:
dimethyl ether 115-10-6	NOAEL P 1.6 %	screening	inhalation: gas	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Propane 74-98-6	NOAEL P 21,6 mg/l NOAEL F1 21,6 mg/l	screening	inhalation: gas	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

STOT-single exposure:

No data available.

STOT-repeated exposure:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	NOAEL 100 mg/kg	oral: gavage	28 d diaily	rat	EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral))
Isobutane 75-28-5	NOAEL 9000 ppm	inhalation: gas	28 d 6 h/d, 7 d/w	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
dimethyl ether 115-10-6	NOAEL 47,106 mg/l NOAEL 2.5 %	inhalation: gas	2 y 6 h/d; 5 d/w	rat	equivalent or similar to OECD Guideline 452 (Chronic Toxicity Studies)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	NOAEL 0,0002 mg/l	inhalation: aerosol	2 y 6 h per d, 5 d per week	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Ethane-1,2-diol 107-21-1	NOAEL 150 mg/kg	oral: feed	16 w daily	rat	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Propane 74-98-6		inhalation: gas	28 d 6 h/d, 7 d/w	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, 1-[2-(2- hydroxyethoxy)ethyl] 2-(2- hydroxypropyl) ester, polymers wit 2639874-15-8	LC50	> 1.000 mg/l	96 h	not specified	not specified
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	LC50	56,2 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	other guideline:
dimethyl ether 115-10-6	LC50	> 4.000 mg/l	96 h	Poecilia reticulata	OECD Guideline 203 (Fish, Acute Toxicity Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	LC50	> 1.000 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethane-1,2-diol 107-21-1	LC50	72.860 mg/l	96 h	Pimephales promelas	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates and Amphibians)
Ethane-1,2-diol 107-21-1	NOEC	15.380 mg/l	7 d	Pimephales promelas	other guideline:

Toxicity (aquatic invertebrates):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
1,2-Benzenedicarboxylic acid,	EC50	> 1.000 mg/l	48 h	not specified	not specified
3,4,5,6-tetrabromo-, 1-[2-(2-					
hydroxyethoxy)ethyl] 2-(2-					
hydroxypropyl) ester,					
polymers wit					
2639874-15-8					
Phosphoric trichloride,	EC50	131 mg/l	48 h	Daphnia magna	not specified
reaction products with					
propylene oxide					
1244733-77-4					
dimethyl ether	EC50	> 4.000 mg/l	48 h	Daphnia magna	OECD Guideline 202
115-10-6					(Daphnia sp. Acute
					Immobilisation Test)
Diphenylmethane	EC50	> 1.000 mg/l	24 h	Daphnia magna	OECD Guideline 202
diisocyanate, isomers and					(Daphnia sp. Acute
homologues					Immobilisation Test)
9016-87-9					
Ethane-1,2-diol	EC50	> 100 mg/l	48 h	Daphnia magna	OECD Guideline 202
107-21-1					(Daphnia sp. Acute
					Immobilisation Test)

Chronic toxicity (aquatic invertebrates):

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type		_		
1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, 1-[2-(2- hydroxyethoxy)ethyl] 2-(2- hydroxypropyl) ester, polymers wit 2639874-15-8	NOEC	> 100 mg/l			not specified
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	NOEC	32 mg/l	21 d	Daphnia magna	OECD Guideline 202 (Daphnia sp. Chronic Immobilisation Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	NOEC	10 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Ethane-1,2-diol 107-21-1	NOEC	8.590 mg/l	7 d	Ceriodaphnia dubia	other guideline:

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type		-		
1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, 1-[2-(2- hydroxyethoxy)ethyl] 2-(2- hydroxypropyl) ester, polymers wit 2639874-15-8	EC50	> 1.000 mg/l	72 h	not specified	not specified
1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, 1-[2-(2- hydroxyethoxy)ethyl] 2-(2- hydroxypropyl) ester, polymers wit 2639874-15-8	NOEC	> 100 mg/l		not specified	not specified
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	EC50	82 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	NOEC	13 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
dimethyl ether 115-10-6	EC50	> 1.000 mg/l	72 h	not specified	OECD Guideline 201 (Alga, Growth Inhibition Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	EC50	> 1.640 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethane-1,2-diol 107-21-1	EC50	> 6.500 - 13.000 mg/l	96 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethane-1,2-diol 107-21-1	NOEC	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity (microorganisms):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type		_		
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	EC 50	784 mg/l	3 h	activated sludge	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
dimethyl ether 115-10-6	EC10	> 1.600 mg/l	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	EC50	> 100 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Ethane-1,2-diol 107-21-1	EC20	> 1.995 mg/l	30 min	activated sludge, domestic	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, 1-[2-(2- hydroxyethoxy)ethyl] 2-(2- hydroxypropyl) ester, polymers wit 2639874-15-8	not readily biodegradable.		< 60 %		OECD 301 A - F
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	not readily biodegradable.	aerobic	14 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Isobutane 75-28-5	readily biodegradable	aerobic	71,43 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
dimethyl ether 115-10-6	readily biodegradable	aerobic	> 60 %	28 d	OECD 301 A - F
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	not inherently biodegradable	aerobic	0 %	28 d	OECD Guideline 302 C (Inherent Biodegradability: Modified MITI Test (II))
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	not readily biodegradable.	not specified	0 %	28 d	OECD 301 A - F
Ethane-1,2-diol 107-21-1	readily biodegradable	aerobic	> 90 - 100 %	10 d	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)
Propane 74-98-6	readily biodegradable	aerobic	> 60 %	28 d	OECD 301 A - F

The table below presents the data of the classified substances present in the mixture.

12.3. Bioaccumulative potential

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Bioconcentratio n factor (BCF)	Exposure time	Temperature	Species	Method
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	0,8 - < 14	42 d		Cyprinus carpio	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	200			Cyprinus carpio	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)

12.4. Mobility in soil

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	LogPow	Temperature	Method
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	2,68	30 °C	EU Method A.8 (Partition Coefficient)
Isobutane 75-28-5	2,88	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
dimethyl ether 115-10-6	0,07	25 °C	QSAR (Quantitative Structure Activity Relationship)
Ethane-1,2-diol 107-21-1	-1,36		QSAR (Quantitative Structure Activity Relationship)

12.5. Results of PBT and vPvB assessment

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	PBT / vPvB
CAS-No.	
Phosphoric trichloride, reaction products with propylene oxide 1244733-77-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Isobutane 75-28-5	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
dimethyl ether 115-10-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Ethane-1,2-diol 107-21-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Propane 74-98-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

080409

SECTION 14: Transport information

14.1.	UN number or]	ID number
	ADR	1950
	RID	1950
	ADN	1950
	IMDG	1950
	IATA	1950
14.2.	UN proper shipping name	
	ADR	AEROSOLS
	RID	AEROSOLS
	ADN	AEROSOLS
	IMDG	AEROSOLS
	IATA	Aerosols, flammable
14.3.	Transport haza	rd class(es)
	ADR	2.1
	RID	2.1
	ADN	2.1
	IMDG	2.1
	IATA	2.1
14.4.	Packing group	
	ADR	
	RID	
	ADN	
	IMDG	
	IATA	
14.5.	Environmental hazards	
	ADR	not applicable
	RID	not applicable
	ADN	not applicable
	IMDG	not applicable
	IATA	not applicable
14.6.	Special precautions for user	
	ADR	not applicable Tunnelcode: (D)
	RID	not applicable
	ADN	not applicable
	IMDG	not applicable
	IATA	not applicable
14.7.	Maritime trans	port in bulk according to IMO instruments
	not applicable	

SECTION 15: Regulatory information

Prior Informed Consent (PIC) (H	OS) (Regulation (EC) No 1005/2009): Regulation (EU) No 649/2012):	Not applicable Not applicable
Persistent organic pollutants (Re	gulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EU)	16,7 %	
VOC Paints and Varnishes (EU	J):	
Product (sub)category:	This product is not a subje	ect of the Directive 2004/42/EC
5.2. Chemical safety assessme A chemical safety assessmen	t has been carried out.	
5.2. Chemical safety assessmen A chemical safety assessmen	t has been carried out. on (Germany): WGK 1: slightly hazardous substances that are hazardou	
15.2. Chemical safety assessmen A chemical safety assessmen National regulations/informatio	t has been carried out. on (Germany): WGK 1: slightly hazardous	us to water (AwSV))
15.2. Chemical safety assessmen A chemical safety assessmen National regulations/informatio	t has been carried out. on (Germany): WGK 1: slightly hazardous substances that are hazardou	us to water (AwSV))
 15.2. Chemical safety assessment A chemical safety assessment National regulations/information WGK: 	t has been carried out. on (Germany): WGK 1: slightly hazardous substances that are hazardou Classification according to a BG data sheet: BGI 621 Solvents	us to water (AwSV)) AwSV, Annex 1 (5.2)
 15.2. Chemical safety assessment A chemical safety assessment National regulations/information WGK: 	t has been carried out. on (Germany): WGK 1: slightly hazardous substances that are hazardou Classification according to a BG data sheet: BGI 621 Solvents	us to water (AwSV)) AwSV, Annex 1 (5.2) us substances: polyurethane production

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

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

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

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

H412 Harmful to aquatic life with long lasting effects.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very
	bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

Further information:

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