

Safety Data Sheet

according to UK REACH Regulation

B1-Pistolenschaum LORENCIC LO-FIRE/EPS-FILLING FOAM 1K 750ml

Revision date: 02.08.2021

Product code: ZKR22LO

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

1.1. Product identifier

B1-Pistolenschaum LORENCIC LO-FIRE/EPS-FILLING FOAM 1K 750ml

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

Use of the substance/mixture

The foam is used for the mounting of doors and windows, for the insulation and fixing of pipes, for filling holes and cracks, for the fixing of wall elements and tiles, and as thermal insulation material. Adheres well to most building materials used, with the exception of teflon, polyethylene and silicone surfaces. The cured foam is sensitive to UV light and direct sunlight.

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	Lorencic GmbH Nfg. & Co KG	
Street:	Puchstraße 208	
Place:	A-8055 Graz	
Telephone:	+43 (0) 316 / 47 25 64 32	Telefax: +43 (0) 316 / 47 25 64 78
Responsible Department:	Dr. Gans-Eichler Chemieberatung GmbH Otto-Hahn-Str. 36 D-48161 Münster	e-mail: info@tge-consult.de Tel.: +49(0)2534 6441185 www.tge-consult.de

1.4. Emergency telephone number:

Poison Control Centre Vienna: +43 (0) 1 406 43 43

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Hazard categories:

Aerosol: Aerosol 1

Acute toxicity: Acute Tox. 4

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Resp. Sens. 1

Respiratory or skin sensitisation: Skin Sens. 1

Carcinogenicity: Carc. 2

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

Extremely flammable aerosol.

Pressurised container: May burst if heated.

Harmful if swallowed.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

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

May cause an allergic skin reaction.

Suspected of causing cancer.

May cause respiratory irritation.

May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

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GB CLP Regulation

Hazard components for labelling

4,4'-methylenediphenyl diisocyanate, isomers and homologues
 Reaction products of phosphoryl trichloride and 2-methyloxirane
 Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, Methoxylated triethyl phosphate

Signal word: Danger

Pictograms:



Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H302+H332	Harmful if swallowed or if inhaled.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
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.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat. No Smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Special labelling of certain mixtures

EUH204 Contains isocyanates. May produce an allergic reaction.
 Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.
 The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name	Index No	REACH No	Quantity
	EC No			
	GHS Classification			

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9016-87-9	4,4'-methylenediphenyl diisocyanate, isomers and homologues		40 - < 60 %
	615-005-01-6		
	Carc. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 2; H351 H332 H315 H319 H334 H317 H335 H373		
1244733-77-4	Reaction products of phosphoryl trichloride and 2-methyloxirane		10 - < 20 %
	807-935-0	01-2119486772-26	
	Acute Tox. 4; H302		
86675-46-9	Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, Methoxylated		10 - < 20 %
	617-903-6	01-2119972940-30	
	Acute Tox. 4; H302		
115-10-6	dimethyl ether		2,5 - < 5 %
	204-065-8	603-019-00-8	01-2119472128-37
	Flam. Gas 1, Liquefied gas; H220 H280		
78-40-0	triethyl phosphate		1 - < 2,5 %
	201-114-5	015-013-00-7	01-2119492852-28
	Acute Tox. 4, Eye Irrit. 2; H302 H319		

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
9016-87-9		4,4'-methylenediphenyl diisocyanate, isomers and homologues	40 - < 60 %
		inhalation: LC50 = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg	
1244733-77-4	807-935-0	Reaction products of phosphoryl trichloride and 2-methyloxirane	10 - < 20 %
		inhalation: LC50 = > 7 mg/l (vapours); dermal: LD50 = >2000 mg/kg; oral: LD50 = 632 mg/kg	
86675-46-9	617-903-6	Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, Methoxylated	10 - < 20 %
		inhalation: LC50 = (>4,9) mg/l (dusts or mists); oral: LD50 = 917 mg/kg	
78-40-0	201-114-5	triethyl phosphate	1 - < 2,5 %
		inhalation: LC50 = > 8,817 mg/l (dusts or mists); oral: LD50 = 1600 mg/kg	

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately.

Apply cortisone spray at early stage.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms,

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consult an ophthalmologist.

After ingestion

If swallowed, immediately drink: Water. Never give anything by mouth to an unconscious person or a person with cramps. Do NOT induce vomiting. Caution if victim vomits: Risk of aspiration! Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No known symptoms to date.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂). Dry extinguishing powder. alcohol resistant foam. Atomized water.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air. Can be released in case of fire: Carbon dioxide (CO₂). Carbon monoxide Nitrogen oxides (NO_x). Hydrogen chloride (HCl). Phosphorus oxides

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains. In case of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Ventilate affected area. Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Explosion hazard. Eliminate leaks immediately. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up

Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7

Disposal: see section 13

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas. Take precautionary measures against static discharges. Do not spray on naked flames or any incandescent material. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

Wear suitable protective clothing. (See section 8.)

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Heating causes rise in pressure with risk of bursting.

Advice on general occupational hygiene

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Remove contaminated clothing immediately and dispose off safely. Wash contaminated clothing prior to re-use. Used working clothes should not be worn outside the work area. Street clothing should be stored separately from work clothing.

Further information on handling

General protection and hygiene measures: refer to chapter 8

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep away from sources of ignition. - No smoking. Provide adequate ventilation.

Hints on joint storage

Do not store together with: Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances and mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. Self-reactive substances and mixtures. Organic peroxides. Radioactive substances.

Infectious substances.

Further information on storage conditions

Recommended storage temperature: 10-30°C. Do not store at temperatures over: 50°C

Note: Storage requirements for flammable aerosols.

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
115-10-6	Dimethyl ether	400	766		TWA (8 h)	WEL
		500	958		STEL (15 min)	WEL
-	Isocyanates, all (as -NCO) Except methyl isocyanate	-	0.02		TWA (8 h)	WEL
		-	0.07		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	DNEL type	Exposure route	Effect	Value
9016-87-9	4,4'-methylenediphenyl diisocyanate, isomers and homologues				

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Consumer DNEL, acute	inhalation	local	0,05 mg/m ³
Consumer DNEL, long-term	inhalation	local	0,0025 mg/m ³
Worker DNEL, acute	inhalation	local	0,1 mg/m ³
Worker DNEL, long-term	inhalation	local	0,05 mg/m ³
1244733-77-4	Reaction products of phosphoryl trichloride and 2-methyloxirane		
Worker DNEL, long-term	inhalation	systemic	8,2 mg/m ³
Worker DNEL, acute	inhalation	systemic	22,6 mg/m ³
Worker DNEL, long-term	dermal	systemic	2,91 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	1,45 mg/m ³
Consumer DNEL, acute	inhalation	systemic	5,6 mg/m ³
Consumer DNEL, long-term	dermal	systemic	1,04 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,52 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	2 mg/kg bw/day
86675-46-9	Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, Methoxylated		
Worker DNEL, long-term	inhalation	systemic	6 mg/m ³
Worker DNEL, long-term	dermal	systemic	0,87 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	1,5 mg/m ³
Consumer DNEL, long-term	dermal	systemic	0,44 mg/kg bw/day
Consumer DNEL, acute	dermal	systemic	1,3 mg/kg bw/day
Consumer DNEL, acute	inhalation	systemic	4,5 mg/m ³
Consumer DNEL, long-term	oral	systemic	0,44 mg/kg bw/day
115-10-6	dimethyl ether		
Consumer DNEL, long-term	inhalation	systemic	471 mg/m ³
Worker DNEL, long-term	inhalation	systemic	1894 mg/m ³
78-40-0	triethyl phosphate		
Consumer DNEL, acute	dermal	systemic	13,3 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	13,3 mg/kg bw/day
Consumer DNEL, long-term	inhalation	local	23,12 mg/m ³
Consumer DNEL, acute	inhalation	systemic	23,12 mg/m ³
Worker DNEL, long-term	inhalation	systemic	9,9 mg/m ³
Worker DNEL, long-term	dermal	systemic	3,33 mg/kg bw/day
Worker DNEL, acute	inhalation	systemic	93,6 mg/m ³
Worker DNEL, acute	dermal	systemic	26,6 mg/kg bw/day
Worker DNEL, long-term	inhalation	local	11,7 mg/m ³
Worker DNEL, acute	inhalation	local	93,6 mg/m ³
Consumer DNEL, long-term	inhalation	systemic	2,89 mg/m ³

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Consumer DNEL, long-term	dermal	systemic	1,66 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	1,66 mg/kg bw/day
Consumer DNEL, acute	inhalation	local	23,12 mg/m ³

PNEC values

CAS No	Substance	Value
Environmental compartment		
9016-87-9	4,4'-methylenediphenyl diisocyanate, isomers and homologues	
Freshwater		1 mg/l
Freshwater (intermittent releases)		10 mg/l
Marine water		0,1 mg/l
Micro-organisms in sewage treatment plants (STP)		1 mg/l
Soil		1 mg/kg
1244733-77-4	Reaction products of phosphoryl trichloride and 2-methyloxirane	
Freshwater		0,32 mg/l
Freshwater (intermittent releases)		0,51 mg/l
Marine water		0,032 mg/l
Freshwater sediment		11,5 mg/kg
Marine sediment		1,15 mg/kg
Secondary poisoning		11,6 mg/kg
Micro-organisms in sewage treatment plants (STP)		19,1 mg/l
Soil		0,34 mg/kg
86675-46-9	Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, Methoxylated	
Freshwater		1 mg/l
Freshwater (intermittent releases)		10 mg/l
Marine water		0,1 mg/l
Freshwater sediment		37,5 mg/kg
Marine sediment		3,75 mg/kg
Micro-organisms in sewage treatment plants (STP)		1 mg/l
Soil		6,92 mg/kg
115-10-6	dimethyl ether	
Freshwater		0,155 mg/l
Freshwater (intermittent releases)		1,549 mg/l
Marine water		0,016 mg/l
Freshwater sediment		0,681 mg/kg
Marine sediment		0,069 mg/kg
Micro-organisms in sewage treatment plants (STP)		160 mg/l
Soil		0,045 mg/kg
78-40-0	triethyl phosphate	
Freshwater		0,632 mg/l
Micro-organisms in sewage treatment plants (STP)		298,5 mg/l

8.2. Exposure controls

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**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear eye/face protection. BS/EN 166

Hand protection

In case of prolonged or frequently repeated skin contact: Wear suitable gloves.

Suitable material:

Butyl rubber. (0,5 mm)

Breakthrough time >480 min

penetration time (maximum wearing period): >160 min

The selected protective gloves have to satisfy the specifications of EU Directive EC/2016/425 and the standard EN 374 derived from it.

Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Protective clothing.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

Exceeding exposure limit values

Insufficient ventilation

Suitable respiratory protective equipment: Protective respiration apparatus not using surrounding air (breathing apparatus) (DIN EN 133).

Use only respiratory protection equipment with CE-symbol including four digit test number.

Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Aerosol
Colour:	pink
Odour:	characteristic

Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	-12 °C
Sublimation point:	not determined
Softening point:	not determined
Flash point:	-83 °C

Flammability

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Gas: not determined

Explosive properties

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Lower explosion limits: not determined

Upper explosion limits: not determined

Auto-ignition temperature: not determined

Self-ignition temperature

Gas: 460 °C

Decomposition temperature: not determined

Oxidizing properties

none

pH-Value: not determined

Viscosity / dynamic:
(at 20 °C) not determined

Viscosity / kinematic: not determined

Flow time: not determined

Water solubility: not determined

Solubility in other solvents

Acetone

Vapour pressure:
(at 20 °C) not determinedVapour pressure:
(at 50 °C) not determinedDensity (at 20 °C): 1,1 g/cm³

Relative vapour density: not determined

9.2. Other information**Other safety characteristics**

Solvent separation test: not determined

Solvent content: not determined

Solid content: not determined

Evaporation rate: not determined

Further Information**SECTION 10: Stability and reactivity****10.1. Reactivity**

No information available.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

Refer to chapter 10.5.

10.4. Conditions to avoid

Keep away from heat.

Ignition hazard.

Heating causes rise in pressure with risk of bursting.

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10.5. Incompatible materials

Alcohol. amines. Ammonia. strong alkalis. Strong acid. Oxidizing agents, strong. Reducing agents, strong.

10.6. Hazardous decomposition products

Combustible. Vapours may form explosive mixtures with air. Can be released in case of fire: Carbon dioxide (CO₂). Carbon monoxide Nitrogen oxides (NO_x). Hydrogen chloride (HCl). Phosphorus oxides

Further information

In use, may form flammable/explosive vapour-air mixture.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicokinetics, metabolism and distribution

No information available.

Acute toxicity

Harmful if swallowed.

Harmful if inhaled.

ATEmix tested

	Dose	Species	Source
LD50, oral	2508,28 mg/kg		in analogy; MSDS extern.
LD50, dermal	>2000 mg/kg		in analogy; MSDS extern.
LC50, inhalation (aerosol) (4 h)	23,16 mg/l		in analogy; MSDS extern.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
9016-87-9	4,4'-methylenediphenyl diisocyanate, isomers and homologues				
	oral	LD50 > 2000 mg/kg			
	dermal	LD50 > 2000 mg/kg			
	inhalation (4 h) vapour	LC50 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			
1244733-77-4	Reaction products of phosphoryl trichloride and 2-methyloxirane				
	oral	LD50 632 mg/kg	Rat	Study report (1996)	other: This study was conducted accordin
	dermal	LD50 >2000 mg/kg	Rat	Study report (1973)	Method: other: undiluted TS was applied
	inhalation (4 h) vapour	LC50 > 7 mg/l	Rat	Study report (1990)	other: Guideline study performed to GLP
86675-46-9	Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, Methoxylated				
	oral	LD50 917 mg/kg	Rat.	ECHA Dossier	
	inhalation (4 h) aerosol	LC50 (>4,9) mg/l	Rat.	ECHA Dossier	
78-40-0	triethyl phosphate				
	oral	LD50 1600 mg/kg	Rat	ECHA Dossier	
	inhalation (4 h) aerosol	LC50 > 8,817 mg/l	Rat	ECHA Dossier	OECD Guideline 403

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Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitising effects

Contains isocyanates. May produce an allergic reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. (4,4'-methylenediphenyl diisocyanate, isomers and homologues)
May cause an allergic skin reaction. (4,4'-methylenediphenyl diisocyanate, isomers and homologues)
The product is: sensitizing.
People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing cancer. (4,4'-methylenediphenyl diisocyanate, isomers and homologues)
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.
4,4'-methylenediphenyl diisocyanate, isomers and homologues
In vitro mutagenicity/genotoxicity: Method: EU Method B.13/14 (Mutagenicity - Reverse Mutation Test Using Bacteria) Result / evaluation: negative. ; In vivo mutagenicity/genotoxicity Method: OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test). Species: Rat. Result / evaluation: negative.; Carcinogenicity: Method: OECD 453. Species: Rat. Exposure duration: 2 years Result / evaluation: NOAEC = 0,2 mg/m³ Air.; Developmental toxicity/teratogenicity: Method: OECD 414. Species: Rat. Result / evaluation: NOAEC = 4 mg/m³ Air. Literature information: ECHA Dossier

triethyl phosphate:

In vitro mutagenicity/genotoxicity: Method: OECD 476. Result / evaluation: negative. Literature information: ECHA Dossier.

STOT-single exposure

May cause respiratory irritation. (4,4'-methylenediphenyl diisocyanate, isomers and homologues)

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (4,4'-methylenediphenyl diisocyanate, isomers and homologues)
4,4'-methylenediphenyl diisocyanate, isomers and homologues
Chronic inhalation toxicity: Method: OECD 453. Species: Rat. Exposure duration: 2 years Result / evaluation: NOAEC = 0,2 mg/m³ Air. Literature information: ECHA Dossier

triethyl phosphate:

Subchronic oral toxicity: Method: OECD 408 Species: Rat. Result / evaluation: NOAEL = 200 mg/kg bw/day
Literature information: ECHA Dossier.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No information available.

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

No information available.

SECTION 12: Ecological information**12.1. Toxicity**

The product has not been tested.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
1244733-77-4	Reaction products of phosphoryl trichloride and 2-methyloxirane					

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	Acute fish toxicity	LC50 (51) mg/l	96 h	Pimephales promelas	Study report (1985)	Static bioassay: method not specified
	Acute algae toxicity	ErC50 (82) mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2004)	OECD Guideline 201
	Acute crustacea toxicity	EC50 131 mg/l	48 h	Daphnia magna	Study report (1985)	Static bioassay: method not specified
	Crustacea toxicity	NOEC 32 mg/l	21 d	Daphnia magna	Study report (1995)	other: OECD Test Guideline 202
	Acute bacteria toxicity	(784 mg/l)	3 h	Activated sludge	Study report (1990)	ISO 8192
86675-46-9	Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, Methoxylated					
	Acute fish toxicity	LC50 >1000 mg/l	96 h	Poecilia reticulata	ECHA Dossier	
	Acute algae toxicity	ErC50 >1000 mg/l	96 h	Pseudokirchnerella subcapitata	ECHA Dossier	
	Acute crustacea toxicity	EC50 >1000 mg/l	48 h	Daphnia magna	ECHA Dossier	
	Acute bacteria toxicity	(>100 mg/l)	3 h	Activated sludge	ECHA Dossier	
115-10-6	dimethyl ether					
	Acute fish toxicity	LC50 > 4100 mg/l	96 h	Poecilia reticulata	ECHA Dossier	NEN 6504 Water - Determination of
	Acute algae toxicity	ErC50 154,917 mg/l	96 h	green algae	ECHA Dossier	Data generated using ECOSAR v1.00
	Acute crustacea toxicity	EC50 > 4400 mg/l	48 h	Daphnia magna	ECHA Dossier	NEN6501: Water -Determination of
78-40-0	triethyl phosphate					
	Acute fish toxicity	LC50 2100 mg/l	96 h	Alburnus alburnus	ECHA Dossier	
	Acute algae toxicity	ErC50 901 mg/l	72 h	Desmodesmus subspicatus	ECHA Dossier	
	Acute crustacea toxicity	EC50 900 mg/l	48 h	Daphnia magna	ECHA Dossier	
	Algae toxicity	NOEC 127,9 mg/l	3 d	Scenedesmus subspicatus	ECHA Dossier	
	Crustacea toxicity	NOEC 31,6 mg/l	21 d	Daphnia magna	ECHA Dossier	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
9016-87-9	4,4'-methylenediphenyl diisocyanate, isomers and homologues	OECD 302	0%	28	
	Not easily bio-degradable (according to OECD-criteria).				
1244733-77-4	Reaction products of phosphoryl trichloride and 2-methyloxirane	EU-method C.4 -D	14%	28	ECHA Dossier
	Product is not easily biodegradable.				
86675-46-9	Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, Methoxylated	OECD 301D/ EEC 92/69/V, C.4-E	10%	28	ECHA Dossier

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	Not readily biodegradable (according to OECD criteria)			
115-10-6	dimethyl ether			
	OECD 301D / EEC 92/69 annex V, C.4-E	5%	28	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			
78-40-0	triethyl phosphate			
	OECD 301C/ ISO 9408/ EEC 92/69/V, C.4-F	0%	28	ECHA Dossier
	Not readily biodegradable (according to OECD criteria)			

12.3. Bioaccumulative potential
Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
1244733-77-4	Reaction products of phosphoryl trichloride and 2-methyloxirane	2,68
86675-46-9	Polymer with 2-Butyne-1,4-Diol and (Chloromethyl-)Oxirane, Brominated, Dehydrochlorinated, Methoxylated	0-3
115-10-6	dimethyl ether	0,07
78-40-0	triethyl phosphate	0,8

BCF

CAS No	Chemical name	BCF	Species	Source
1244733-77-4	Reaction products of phosphoryl trichloride and 2-methyloxirane	0,8 - 2,8	Cyprinus carpio	Japan Chemical Indus
78-40-0	triethyl phosphate	<1,3	Cyprinus carpio	ECHA Dossier

12.4. Mobility in soil

Reaction products of phosphoryl trichloride and 2-methyloxirane, Mobility/evaluation: Koc (20°C): 324,2
 1,1- Difluoroethane, Mobility/evaluation: Koc (20°C): 4,47

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Disposal recommendations

Dispose of waste according to applicable legislation.
 Non-contaminated packages may be recycled.
 According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.
 Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

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150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number or ID number:** UN 1950**14.2. UN proper shipping name:** AEROSOLS**14.3. Transport hazard class(es):** 2**14.4. Packing group:** -

Hazard label: 2.1



Classification code: 5F

Special Provisions: 190 327 344 625

Limited quantity: 1 L

Excepted quantity: E0

Transport category: 2

Tunnel restriction code: D

Inland waterways transport (ADN)**14.1. UN number or ID number:** UN 1950**14.2. UN proper shipping name:** AEROSOLS**14.3. Transport hazard class(es):** 2**14.4. Packing group:** -

Hazard label: 2.1



Classification code: 5F

Special Provisions: 190 327 344 625

Limited quantity: 1 L

Excepted quantity: E0

Marine transport (IMDG)**14.1. UN number or ID number:** UN 1950**14.2. UN proper shipping name:** AEROSOLS**14.3. Transport hazard class(es):** 2.1**14.4. Packing group:** -

Hazard label: 2.1



Marine pollutant: NO

Special Provisions: 63, 190, 277, 327, 344, 381, 959

Limited quantity: 1000 mL

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Excepted quantity: E0
EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS, flammable
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
Hazard label: 2.1



Special Provisions: A145 A167 A802
Limited quantity Passenger: 30 kg G
Passenger LQ: Y203
Excepted quantity: E0
IATA-packing instructions - Passenger: 203
IATA-max. quantity - Passenger: 75 kg
IATA-packing instructions - Cargo: 203
IATA-max. quantity - Cargo: 150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Refer to section 6-8

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 56

2010/75/EU (VOC): 11,32 %
2004/42/EC (VOC): 124,59 kg/m³ (124,59 g/L)
Information according to 2012/18/EU (SEVESO III): P3a FLAMMABLE AEROSOLS

Additional information

Aerosol directive (75/324/EEC)

UK REACH Appendix XVII, No (mixture): 3, 28, 40, 56.

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

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SECTION 16: Other information**Changes**

Rev. 1,00; 03.06.2014, Initial release

Rev. 1.01; 02.06.2015, Documentation of changes: chapter: 2, 3, 8, 9, 11, 12, 13, 14, 15, 16.

Rev. 2,0; 28.05.2018, Documentation of changes: chapter: 2, 3, 8, 9, 11, 12, 13, 14, 15, 16.

Rev. 3,0; 02.08.2021, Documentation of changes: chapter: 1 - 16.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service

CLP: Classification, Labelling and Packaging of substances and mixtures

DNEL: Derived No Effect Level

d: day(s)

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

ECHA: European Chemicals Agency

EWC: European Waste Catalogue

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

h: hour

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect concentration

NLP: No-Longer Polymers

N/A: not applicable

OECD: Organisation for Economic Co-operation and Development

PNEC: predicted no effect concentration

PBT: Persistent bioaccumulative toxic

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

REACH: Registration, Evaluation, Authorisation of Chemicals

SVHC: substance of very high concern

TRGS: Technische Regeln für Gefahrstoffe

UN: United Nations

VOC: Volatile Organic Compounds

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Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Acute Tox. 4; H302	Bridging principle "Aerosols"
Acute Tox. 4; H332	Bridging principle "Aerosols"
Skin Irrit. 2; H315	Bridging principle "Aerosols"
Eye Irrit. 2; H319	Bridging principle "Aerosols"
Resp. Sens. 1; H334	Bridging principle "Aerosols"
Skin Sens. 1; H317	Bridging principle "Aerosols"
Carc. 2; H351	Calculation method
STOT SE 3; H335	Bridging principle "Aerosols"
STOT RE 2; H373	Bridging principle "Aerosols"

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
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.
EUH204	Contains isocyanates. May produce an allergic reaction.

Further Information

Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)