

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Plattenkleber LO-BOARD-FIX 1K 750ml**

Revision date: 08.06.2018

Product code: ZKR14LO

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Plattenkleber LO-BOARD-FIX 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	e-mail:	info@tge-consult.de
	Chemieberatung GmbH	Tel.:	+49(0)251/394868-69
	Raesfeldstr. 22		www.tge-consult.de
	D-48149 Münster		

**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****Regulation (EC) No. 1272/2008**

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 inhaled.

Harmful if swallowed.

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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**Regulation (EC) No. 1272/2008**
**Hazard components for labelling**

4,4'-methylenediphenyl diisocyanate, isomers and homologues  
 Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and Phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester  
 Glycerol, propoxylated

**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 to 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	Quantity
	EC No	Index No
	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]	

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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		
	Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and Phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester		10 - < 20 %
	911-815-4	01-2119486772-26	
	Acute Tox. 4; H302		
25791-96-2	Glycerol, propoxylated		10 - < 20 %
	500-044-5		
	Acute Tox. 4; H302		
115-10-6	dimethyl ether		5 - < 10 %
	204-065-8	603-019-00-8	01-2119472128-37
	Flam. Gas 1, Compressed gas; H220 H280		

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

**Further Information**

Product does not contain listed SVHC substances &gt; 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, 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**

refer to section 2 and 11.

**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**

Foam. Carbon dioxide. Extinguishing powder.

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#### Unsuitable extinguishing media

High power water jet.  
Water spray.  
Water

#### 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 (CO<sub>2</sub>). Carbon monoxide Hydrogen cyanide (hydrocyanic acid) Isocyanates Nitrogen oxides (NO<sub>x</sub>).

#### 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

Ventilate affected area. Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment (refer to section 8). 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

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.  
Clean contaminated objects and areas thoroughly observing environmental regulations.

#### 6.4. Reference to other sections

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

### 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.

##### 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.  
Keep container dry.

##### Advice on storage compatibility

Do not store together with: Gas. Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating

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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: 5-30°C. Do not store at temperatures over: 50°C  
 Unsuitable materials for Container: metal.  
 Protect against direct sunlight.

#### 7.3. Specific end use(s)

Observe technical data sheet.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	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	Exposure route	Effect	Value
	Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and Phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester			
Worker DNEL, acute		dermal	systemic	8 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	22,4 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	8 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	22,4 mg/m <sup>3</sup>
Consumer DNEL, acute		dermal	systemic	4 mg/kg bw/day
Consumer DNEL, acute		inhalation	systemic	11,2 mg/m <sup>3</sup>
Consumer DNEL, long-term		oral	systemic	0,52 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	1,04 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,46 mg/m <sup>3</sup>

##### PNEC values

CAS No	Substance	Value
	Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and Phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester	
Freshwater		0,64 mg/l
Freshwater (intermittent releases)		0,51 mg/l
Marine water		0,064 mg/l

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Freshwater sediment	13,4 mg/kg
Marine sediment	1,34 mg/kg
Secondary poisoning	11,6 mg/kg
Micro-organisms in sewage treatment plants (STP)	7,48 mg/l
Soil	1,7 mg/kg
115-10-6	dimethyl ether
Freshwater	0,155 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

**8.2. Exposure controls**

**Appropriate engineering controls**

Provide adequate ventilation as well as local exhaust at critical locations.

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Protective and hygiene measures**

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.

**Eye/face protection**

Wear eye/face protection. DIN 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 89/686/EEC 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.

**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.

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**Environmental exposure controls**

Do not allow to enter into surface water or drains.

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

Physical state:	Aerosol	
Colour:	not determined	
Odour:	characteristic	
pH-Value:		not determined

**Changes in the physical state**

Melting point:		not determined
Initial boiling point and boiling range:		-12 °C
Sublimation point:		not determined
Softening point:		not determined
Flash point:		-83 °C

**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
Ignition temperature:		not determined

**Auto-ignition temperature**

Gas:		460 °C
Decomposition temperature:		not determined

**Oxidizing properties**

none

Vapour pressure:		not determined
(at 20 °C)		
Vapour pressure:		<3000 hPa
(at 50 °C)		
Density (at 20 °C):		1,02 g/cm <sup>3</sup>
Water solubility:		not determined

**Solubility in other solvents**

not determined

Viscosity / dynamic:		not determined
(at 20 °C)		
Viscosity / kinematic:		not determined
Flow time:		not determined
Vapour density:		not determined
Evaporation rate:		not determined
Solvent separation test:		not determined
Solvent content:		not determined

**9.2. Other information**

Solid content:		not determined
No information available.		

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

No information available.

**10.2. Chemical stability**

The mixture is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

Heating causes rise in pressure with risk of bursting.

**10.4. Conditions to avoid**

Keep away from heat. Ignition hazard.

**10.5. Incompatible materials**

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

**10.6. Hazardous decomposition products**

 In use, may form flammable/explosive vapour-air mixture. Can be released in case of fire: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide Nitrogen oxides (NO<sub>x</sub>).

**SECTION 11: Toxicological information**
**11.1. Information on toxicological effects**
**Toxicokinetics, metabolism and distribution**

No information available.

**Acute toxicity**

Harmful if swallowed or if inhaled.

**ATEmix calculated**

ATE (oral) 1331,9 mg/kg; ATE (inhalation aerosol) 3,000 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
9016-87-9	4,4'-methylenediphenyl diisocyanate, isomers and homologues				
	inhalation vapour	ATE 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			
	Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and Phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester				
	oral	LD50 632 mg/kg	Rat	ECHA Dossier	
	dermal	LD50 >2000 mg/kg	Rat	ECHA Dossier	
	inhalation (4 h) aerosol	LC50 >7 mg/l	Rat	ECHA Dossier	
25791-96-2	Glycerol, propoxylated				
	oral	ATE 500 mg/kg			
115-10-6	dimethyl ether				
	inhalation (4 h) gas	LC50 164000 ppm	Rat	ECHA Dossier	

**Irritation and corrosivity**

Causes skin irritation.

Causes serious eye irritation.



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**Sensitising effects**

Contains isocyanates. May produce an allergic reaction. May cause an allergic skin reaction.

(4,4'-methylenediphenyl diisocyanate, isomers and homologues)

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

isobutane:

In vitro mutagenicity/genotoxicity: No experimental indications of mutagenicity in-vitro exist. Reproductive

toxicity: NOAEC = 3000 ppm (OECD Guideline 422) Developmental toxicity/teratogenicity: NOAEC = 9000 ppm (OECD Guideline 422) Literature information: ECHA Dossier

dimethyl ether:

Developmental toxicity/teratogenicity: NOAEL = 4000 ppm; Literature information: ECHA Dossier

In-vitro mutagenicity:

Method: OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)

Result: negative. Literature information: ECHA Dossier

Carcinogenicity:

Method: (inhalative) OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Species: Rat; Length of test: 2 years

Result: negative. Literature information: ECHA Dossier

propane:

In-vitro mutagenicity: Method: OECD Guideline 471 (Bacterial Reverse Mutation Assay) Result: negative.

Literature information: ECHA Dossier

Reproductive toxicity: Method: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Species: Rat Exposure duration: 6 w. Results: NOAEC = 12000 ppm. Literature information: ECHA Dossier

Developmental toxicity/teratogenicity: Method: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) Species: Rat Results: NOAEC = 12000 ppm.

Literature information: ECHA Dossier

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/m<sup>3</sup> Air.;

Developmental toxicity/teratogenicity: Method: OECD 414. Species: Rat. Result / evaluation: NOAEC = 4 mg/m<sup>3</sup> Air. Literature information: ECHA Dossier

Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and Phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester:

In vitro mutagenicity/genotoxicity: Method: OECD 476. Result / evaluation: positive.; In vivo

mutagenicity/genotoxicity: Method: OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test). Result /

evaluation: negative.; Reproductive toxicity: Method: OECD 416. Species: Rat. Result / evaluation: NOAEL =

85 mg/kg bw/day. Literature information: ECHA Dossier

**STOT-single exposure**

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

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**STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure. (4,4'-methylenediphenyl diisocyanate, isomers and homologues)

isobutane:

NOAEC = 4000 ppm (OECD Guideline 422) Literature information: ECHA Dossier

dimethyl ether:

Chronic inhalative toxicity: NOAEL = 47106 mg/m<sup>3</sup> (Rat)

OECD Guideline 452

Literature information: ECHA Dossier

propane:

Subacute inhalative toxicity: Method: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) Species: Rat Exposure duration: 6 w. Result: NOAEC = 94000 ppm ( 7214 mg/m<sup>3</sup>) Literature information: ECHA Dossier

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/m<sup>3</sup> Air. Literature information: ECHA Dossier

Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and Phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester:

Subchronic oral toxicity: Species: Rat. Result / evaluation: NOAEL = 2500 ppm . 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.

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
	Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and Phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester					
	Acute crustacea toxicity	EC50	131 mg/l	48 h	Daphnia magna	ECHA Dossier
	Crustacea toxicity	NOEC	(32) mg/l	21 d	Daphnia magna	ECHA Dossier
115-10-6	dimethyl ether					
	Acute fish toxicity	LC50	>4100 mg/l	96 h	Poecilia reticulata	ECHA Dossier
	Acute crustacea toxicity	EC50	>4400 mg/l	48 h	Daphnia magna	ECHA Dossier

**12.2. Persistence and degradability**

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
9016-87-9	4,4'-methylenediphenyl diisocyanate, isomers and homologues				
	OECD 302	0%	28		

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	Not easily bio-degradable (according to OECD-criteria).			
	Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and Phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester			
	EU Method C.6	13%	28	ECHA Dossier
	Product is not easily biodegradable.			
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).			

**12.3. Bioaccumulative potential**
**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
	Reaction mass of tris(2-chloropropyl) phosphate and tris(2-chloro-1-methylethyl) phosphate and Phosphoric acid, bis(2-chloro-1-methylethyl) 2-chloropropyl ester and Phosphoric acid, 2-chloro-1-methylethyl bis(2-chloropropyl) ester	2,68
115-10-6	dimethyl ether	0,07

**12.4. Mobility in soil**

Diphenylmethanediisocyanate - Isomers &amp; homologues:

Koc: 7,759

**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. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Advice on disposal**

Dispose of waste according to applicable legislation.

Non-contaminated packages may be recycled.

According to EAKV, 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 EAKV:

**Waste disposal number of waste from 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

**Waste disposal number of 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

**Waste disposal number of contaminated packaging**

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**

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**Land transport (ADR/RID)**

**14.1. UN 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:** 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:** 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  
Excepted quantity: E0  
EmS: F-D, S-U

**Air transport (ICAO-TI/IATA-DGR)**

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

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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 chapter 6-8

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

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 28: isobutane

Entry 56: 4,4'-methylenediphenyl diisocyanate, isomers and homologues

2010/75/EU (VOC): 16,75%

2004/42/EC (VOC): 170,85 g/l

Information according to 2012/18/EU (SEVESO III): P3a FLAMMABLE AEROSOLS

**Additional information**

Aerosol directive (75/324/EEC)

REACH 1907/2006 Appendix XVII, No (mixture): 3, 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 juvenils 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 contaminating class (D):

1 - slightly water contaminating

**15.2. Chemical safety assessment**

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

**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. 1.02; 01.09.2015, Documentation of changes: chapter: 2, 3, 4, 5, 8, 9, 15, 16.

Rev. 2,0; 08.06.2018, Changes in chapter: 1-16.

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**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
 CAS: Chemical Abstracts Service  
 DNEL: Derived No Effect Level  
 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)  
 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 level  
 NTP: National Toxicology Program  
 N/A: not applicable  
 OSHA: Occupational Safety and Health Administration  
 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 )  
 SARA: Superfund Amendments and Reauthorization Act  
 SVHC: substance of very high concern  
 TRGS: Technische Regeln fuerGefahrstoffe  
 TSCA: Toxic Substances Control Act  
 VOC: Volatile Organic Compounds  
 VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe  
 WGK: Wassergefaehrdungsklasse

**Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]**

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Acute Tox. 4; H332	Bridging principle "Aerosols"
Acute Tox. 4; H302	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.

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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 EC regulation 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.

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