

# SAFETY DATA SHEET

**RAWLPLUG®**

according to Regulation (EC) No 1907/2006 (REACH) as amended

## RAWLPLUG GUN FOAM SUPER EFFICIENT R-RPP-65

Creation date	03rd October 2010	Version	2.0
Revision date	29th July 2022		

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

**1.1. Product identifier** RAWLPLUG GUN FOAM SUPER EFFICIENT R-RPP-65

Substance / mixture mixture

UFI DDQ0-794S-V00N-TPV8

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

#### Mixture's intended use

in construction – Single-component polyurethane foam in gun applicator version, with increased efficiency up to 65L, is destined for assembling, insulation and sealing.

#### Main intended use

PC-ADH-2 Adhesives and sealants - building and construction works (except cement based adhesives)

#### Mixture uses advised against

The product should not be used in ways other than those referred in Section 1.

**1.3. Details of the supplier of the safety data sheet**

#### Supplier

Name or trade name	Rawlplug S.A.
Address	Kwidzyńska 6 , Wrocław , 51-416 Poland
Phone	+48 (71) 32 60 100, 0 801 000 103
E-mail	info@rawlplug.com
Web address	www.rawlplug.com

#### Competent person responsible for the safety data sheet

Name	Rytm-L Sp. z o.o.
E-mail	chb_karty@rytm-l.pl

**1.4. Emergency telephone number**

European emergency number: 112

### SECTION 2: Hazards identification

**2.1. Classification of the substance or mixture**

#### Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Aerosol 1, H222, H229  
Skin Irrit. 2, H315  
Skin Sens. 1B, H317  
Eye Irrit. 2, H319  
Acute Tox. 4, H332  
Resp. Sens. 1, H334  
STOT SE 3, H335  
Carc. 2, H351  
Lact., H362  
STOT RE 2, H373 (respiratory tract) (inhalation)  
Aquatic Acute 1, H400  
Aquatic Chronic 1, H410

Full text of all classifications and hazard statements is given in the section 16.

**2.2. Label elements**

#### Hazard pictogram



#### Signal word

Danger

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### Hazardous substances

Diphenylmethane diisocyanate, isomers and homologues alkanes, C14-17, chloro

### Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised 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.
H362	May cause harm to breast-fed children.
H373	May cause damage to the respiratory tract through prolonged or repeated exposure if inhaled.
H410	Very toxic to aquatic life with long lasting effects.

### 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, hot surfaces, sparks, open flames and other ignition sources. 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 gas/vapour/aerosol.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
P501	Dispose of contents/container to according to applicable regulations.

### Supplemental information

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

### Requirements for child-resistant fastenings and tactile warning of danger

Container must carry a tactile warning of danger.

### 2.3. Other hazards

Mixture does contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

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### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Chemical characterization

Mixture.

**Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment**

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 9016-87-9	Diphenylmethane diisocyanate, isomers and homologues	38-55	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319 Acute Tox. 4, H332 Resp. Sens. 1, H334 STOT SE 3, H335 Carc. 2, H351 STOT RE 2, H373 (respiratory tract) (inhalation) Specific concentration limit: Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335: C ≥ 5 % Resp. Sens. 1, H334: C ≥ 0,1 %	
CAS: 13674-84-5 EC: 237-158-7 Registration number: 01-2119486772-26-xxxx	tris(2-chloro-1-methylethyl) phosphate	<20	Acute Tox. 4, H302	
Index: 603-019-00-8 CAS: 115-10-6 EC: 204-065-8 Registration number: 01-2119472128-37-xxxx	dimethyl ether	<12	Flam. Gas 1, H220 Press. Gas (liquefied gas), H280	2, 3
Index: 602-095-00-X CAS: 85535-85-9 EC: 287-477-0 Registration number: 01-2119519269-33-xxxx	alkanes, C14-17, chloro	<10	Lact., H362 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=10) EUH066	4, 5
Index: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7 Registration number: 01-2119474691-32-xxxx	butane	4	Flam. Gas 1, H220 Press. Gas (liquefied gas), H280	1, 2
Index: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9 Registration number: 01-2119486944-21-xxxx	propane	3	Flam. Gas 1, H220 Press. Gas (liquefied gas), H280	2
Index: 601-004-00-0 CAS: 75-28-5 EC: 200-857-2 Registration number: 01-2119485395-27-xxxx	isobutane	3	Flam. Gas 1, H220 Press. Gas (liquefied gas), H280	1, 2

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### Notes

- Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
- Note U (Table 3): When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:

Press. Gas (Comp.)  
Press. Gas (Liq.)  
Press. Gas (Ref. Liq.)  
Press. Gas (Diss.)

Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

- Substance with a Union workplace exposure limit.
- Substance of very high concern - SVHC.
- Persistent, bioaccumulative and toxic or very persistent and very bioaccumulative

Full text of all classifications and hazard statements is given in the section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

##### If inhaled

Remove person to fresh air and keep comfortable for breathing. In the event of issues, find medical advice.

##### If on skin

Remove contaminated clothes immediately. Wash with plenty of soap and water. Provide medical treatment if skin irritation persists.

##### If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed). Rinsing should continue at least for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Provide medical treatment, specialized if possible.

##### If swallowed

DO NOT INDUCE VOMITING! Rinse out the mouth with clean water. Provide medical treatment.

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

##### If inhaled

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

##### If on skin

May cause an allergic skin reaction. Possible irritation.

##### If in eyes

Causes serious eye irritation. Temporary feeling of burning and redness.

##### If swallowed

Not expected.

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

Symptomatic treatment.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Carbon dioxide, powder, water spray jet, water mist. Accommodate extinguishing components to the location of fire.

##### Unsuitable extinguishing media

Water - full jet.

#### 5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Trace amounts of cyanide may be formed. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

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### 5.3. Advice for firefighters

Use a self-contained breathing apparatus and full-body protective clothing. Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Do not inhale gases and vapours. Use personal protective equipment for work. Remove all ignition sources; provide sufficient ventilation. Follow the instructions in the Sections 7 and 8.

### 6.2. Environmental precautions

Do not allow to enter drains. Prevent contamination of the soil and entering surface or ground water.

### 6.3. Methods and material for containment and cleaning up

Uncured foam can be removed with a cloth and solvents, e.g. acetone. Collect in a waste container. Ventilate the room. Remove hardened foam mechanically. Hardening of the foam occurs when exposed to humidity. Dispose of the collected material according to the instructions in the section 13.

### 6.4. Reference to other sections

For information on safe handling, see section 7.  
For information on personal protective equipment, see section 8.  
For information on disposal, see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Use personal protective equipment as per Section 8. Do not get in eyes, on skin. Do not inhale gases and vapours. Use only outdoors or in a well-ventilated area. Protect against sources of heating and ignition or direct sunlight. Do not eat, drink or smoke when using this product. Do not pierce or burn, even after use. Wash hands and exposed parts of the body thoroughly after handling.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in originally closed containers in an upright position, in cold, dry and well ventilated areas designated for this purpose. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not expose to sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Recommended storage temperature is from +5 °C to +30 °C (optimally +20 °C). Protect against frost. Do not store together with food, drink and animal feed. Keep out of reach of children.

Content	Packaging type	Material of package
830 ml	can / tin	FE

Storage class 2B - Aerosols  
Storage temperature +5 - +30 °C

### 7.3. Specific end use(s)

not available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

#### European Union

#### Commission Directive 2000/39/EC

Substance name (component)	Type	Value
dimethyl ether (CAS: 115-10-6)	OEL 8 hours	1920 mg/m <sup>3</sup>
	OEL 8 hours	1000 ppm

#### DNEL

alkanes, C14-17, chloro

Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Consumers	Oral	0.58 mg/kg bw/day	Systemic chronic effects		

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alkanes, C14-17, chloro

Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Consumers	Dermal	28.75 mg/kg bw/day	Systemic chronic effects		
Workers	Dermal	47.9 mg/kg bw/day	Systemic chronic effects		
Consumers	Inhalation	2 mg/m <sup>3</sup>	Systemic chronic effects		
Workers	Inhalation	6.7 mg/m <sup>3</sup>	Systemic chronic effects		

Diphenylmethane diisocyanate, isomers and homologues

Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	0.1 mg/m <sup>3</sup>	Local acute effects		
Workers	Inhalation	0.05 mg/m <sup>3</sup>	Local chronic effects		
Consumers	Inhalation	0.05 mg/m <sup>3</sup>	Local acute effects		
Consumers	Inhalation	0.025 mg/m <sup>3</sup>	Local chronic effects		

tris(2-chloro-1-methylethyl) phosphate

Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Consumers	Dermal	4 mg/kg	Systemic acute effects		
Consumers	Inhalation	43 mg/m <sup>3</sup>	Systemic acute effects		
Consumers	Dermal	1.04 mg/kg bw/day	Systemic chronic effects		
Consumers	Inhalation	0.52 mg/m <sup>3</sup>	Systemic chronic effects		
Consumers	Oral	0.52 mg/kg bw/day	Systemic chronic effects		

### PNEC

alkanes, C14-17, chloro

Route of exposure	Value	Value determination	Source
Drinking water	0.001 mg/l		
Seawater	0.0002 mg/l		
Microorganisms in wastewater treatment plants	80 mg/l		
Freshwater sediment	13 mg/kg of dry substance of sediment		
Sea sediments	2.6 mg/kg of dry substance of sediment		
Soil (agricultural)	11.9 mg/kg of dry substance of soil		
Oral	10 mg/kg of food		

Diphenylmethane diisocyanate, isomers and homologues

Route of exposure	Value	Value determination	Source
Drinking water	3.7 µg/l		
Seawater	0.37 µg/l		

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Diphenylmethane diisocyanate, isomers and homologues

Route of exposure	Value	Value determination	Source
Freshwater sediment	11.7 mg/kg of dry substance of sediment		
Sea sediments	1.17 mg/kg of dry substance of sediment		
Soil (agricultural)	2.33 mg/kg of dry substance of soil		
Water (intermittent release)	37 µg/l		

tris(2-chloro-1-methylethyl) phosphate

Route of exposure	Value	Value determination	Source
Water (intermittent release)	0.51 mg/l		
Drinking water	0.64 mg/l		
Seawater	0.064 mg/l		
Soil (agricultural)	1.7 mg/kg of dry substance of soil		
Freshwater sediment	13.4 mg/kg of dry substance of sediment		
Sea sediments	1.34 mg/kg of dry substance of sediment		
Microorganisms in wastewater treatment plants	7.84 mg/l		
Oral	<11.6 mg/kg of food		

### 8.2. Exposure controls

Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

#### Eye/face protection

EN166 - Personal Eye Protection Standard. Protective goggles.

#### Skin protection

Hand protection: Protective gloves resistant to the product according to EN ISO 374-1. Use gloves of PVC or rubber (type of gloves to protect against chemicals should be chosen depending on the concentration and quantity of the hazardous substance). For special applications, we recommend contacting the manufacturer of protective gloves in order to explain the resistance of the aforementioned gloves for chemicals. Contaminated skin should be washed thoroughly with water and soap.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection. Use a mask with a gas filter in a poorly ventilated environment (e.g. type A1 according to EN 14387).

#### Thermal hazard

not available

#### Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

#### More information

Personal protective equipment should be selected in accordance with the relevant EN standards and in agreement with their supplier.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state

liquid

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Colour	yellow
color intensity	light
Odour	characteristic
Melting point/freezing point	not determined
Diphenylmethane diisocyanate, isomers and homologues (CAS: 9016-87-9)	<0 °C (DIN 51556)
Boiling point or initial boiling point and boiling range	-42 °C
Diphenylmethane diisocyanate, isomers and homologues (CAS: 9016-87-9)	>300 °C
Flammability	inflammable
Diphenylmethane diisocyanate, isomers and homologues (CAS: 9016-87-9)	niepalny
Lower and upper explosion limit	
bottom	1,5 %
upper	10,9 %
Flash point	-80 °C
Diphenylmethane diisocyanate, isomers and homologues (CAS: 9016-87-9)	>200 °C
Auto-ignition temperature	not applicable
Diphenylmethane diisocyanate, isomers and homologues (CAS: 9016-87-9)	>600 °C (EU Method A.15)
Decomposition temperature	data not available
pH	reacts with water
Kinematic viscosity	data not available
Solubility in water	insoluble
Partition coefficient n-octanol/water (log value)	data not available
Diphenylmethane diisocyanate, isomers and homologues (CAS: 9016-87-9)	reaguje z wodą
Vapour pressure	1200-7500 hPa at 20 °C
Diphenylmethane diisocyanate, isomers and homologues (CAS: 9016-87-9)	<0,00001 mm Hg at 25 °C (Literatura)
Density and/or relative density	
Density	1,2 g/cm <sup>3</sup> at 20 °C
Diphenylmethane diisocyanate, isomers and homologues (CAS: 9016-87-9)	1,23 g/cm <sup>3</sup> at 25 °C (Literatura)
Relative vapour density	data not available
Particle characteristics	data not available
Form	liquid, aerosol

### 9.2. Other information

not available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

When used and stored in the standard way, the mixture is not reactive.

### 10.2. Chemical stability

The product is stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Reacts with substances containing an active hydrogen atom (amines, alcohols), reacts with water. Avoid strong acids and alkalis.

### 10.4. Conditions to avoid

Pressurised container: May burst if heated. Protect against flames, sparks, overheating and against frost.

### 10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

### 10.6. Hazardous decomposition products

Not developed under normal uses.



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### SECTION 11: Toxicological information

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

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. No toxicological data is available for the mixture.

##### Acute toxicity

Based on available data the classification criteria are not met.  
alkanes, C14-17, chloro

Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex
Oral	LD <sub>50</sub>		>4000 mg/kg		Rat	

butane

Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex
Inhalation	LC <sub>50</sub>		658 mg/l	4 hour	Rat	

Diphenylmethane diisocyanate, isomers and homologues

Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex
Oral	LD <sub>50</sub>		>2000 mg/kg		Rat (Rattus norvegicus)	F/M
Inhalation	LC <sub>50</sub>	OECD 403	431 mg/m <sup>3</sup> of air	4 hour	Rat (Rattus norvegicus)	F/M
Dermal	LD <sub>50</sub>	OECD 402	>9400 mg/kg	24 hour	Rabbit	F/M

tris(2-chloro-1-methylethyl) phosphate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex
Oral	LD <sub>50</sub>		630-2000 mg/kg		Rat	
Oral	LD <sub>50</sub>		>2000 mg/kg		Rabbit	
Dermal	LD <sub>50</sub>		>2000 mg/kg		Rat	
Inhalation	LC <sub>50</sub>		>7 mg/l	4 hour	Rat	

##### Skin corrosion/irritation

Causes skin irritation.

Diphenylmethane diisocyanate, isomers and homologues

Route of exposure	Result	Method	Exposure time	Species
Dermal	Irritating	OECD 404		Rabbit

##### Serious eye damage/irritation

Causes serious eye irritation.

Diphenylmethane diisocyanate, isomers and homologues

Route of exposure	Result	Method	Exposure time	Species
Eye	No effect	OECD 405		Rabbit

##### Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Diphenylmethane diisocyanate, isomers and homologues

Route of exposure	Result	Method	Exposure time	Species	Sex
Skin	Sensitizing	OECD 429		Guinea-pig	
Inhalation	Sensitizing			Rat	

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### Germ cell mutagenicity

Based on available data the classification criteria are not met.

Diphenylmethane diisocyanate, isomers and homologues

Result	Method	Exposure time	Specific target organ	Species	Sex
Negative	EU B.13/14			Bacteria (Salmonella typhimurium)	
Negative	OECD 474	3 week (1 hour/day, 1 days/week)		Rat	M

### Carcinogenicity

Suspected of causing cancer.

### Reproductive toxicity

May cause harm to breast-fed children.

Diphenylmethane diisocyanate, isomers and homologues

Effect	Parameter	Method	Value	Exposure time	Result	Species	Sex
	NOAEC	OECD 414	4 mg/m <sup>3</sup> of air	10 day (6 hour/day)	Maternal toxicity	Rat	F

### Toxicity for specific target organ - single exposure

May cause respiratory irritation.

Diphenylmethane diisocyanate, isomers and homologues

Route of exposure	Parameter	Value	Result	Species	Sex
Inhalation			Irritating		

### Toxicity for specific target organ - repeated exposure

May cause damage to the respiratory tract through prolonged or repeated exposure if inhaled.

Diphenylmethane diisocyanate, isomers and homologues

Route of exposure	Parameter	Method	Value	Exposure time	Specific target organ	Result	Species	Sex
Inhalation (aerosols)		OECD 453	0.23 mg/m <sup>3</sup> of air	2 year (17 hour/day, 5 days/week)	Lungs		Rat	F

### Aspiration hazard

Based on available data the classification criteria are not met.

Diphenylmethane diisocyanate, isomers and homologues

Route of exposure	Result	Exposure time	Species	Sex	Value determination
					Insufficient data

### 11.2. Information on other hazards

Endocrine disrupting properties: Based on available data, the criteria for classification are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute toxicity

Toxic to aquatic life with long lasting effects.

alkanes, C14-17, chloro

Parameter	Method	Value	Exposure time	Species	Environment
EC <sub>50</sub>	OECD 202	0.006 mg/l	48 hour	Daphnia (Daphnia magna)	
LC <sub>50</sub>	OECD 203	>5000 mg/l	96 hour	Fishes	
EC <sub>50</sub>	OECD 201	>3.2 mg/l	72 hour	Algae	

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### Diphenylmethane diisocyanate, isomers and homologues

Parameter	Method	Value	Exposure time	Species	Environment
LC <sub>50</sub>	OECD 203	>1000 mg/l	96 hour	Fishes (Danio rerio)	Freshwater
EC <sub>50</sub>	OECD 202	3.7 mg/l	48 hour	Daphnia (Daphnia magna)	Freshwater
EC <sub>50</sub>	OECD 201	>100 mg/l	72 hour	Algae (Desmodesmus subspicatus)	Freshwater
EC <sub>50</sub>	OECD 209	>100 mg/l	3 hour	Microorganisms	Activated sludge
LC <sub>50</sub>	OECD 207	>1000 mg/kg of dry substance of soil	14 day	Invertebrates (Eisenia fetida)	
EC <sub>50</sub>	OECD 208	>1000 mg/kg of dry substance of soil	14 day	Higher plants (Avena sativa)	
EC <sub>50</sub>	OECD 208	>1000 mg/kg of dry substance of soil	14 day	Higher plants (Lactuca sativa)	

### tris(2-chloro-1-methylethyl) phosphate

Parameter	Method	Value	Exposure time	Species	Environment
LC <sub>50</sub>		56.2 mg/l	96 hour	Fishes	Freshwater
EC <sub>50</sub>		131 mg/l	48 hour	Daphnia (Daphnia magna)	Freshwater
EC <sub>50</sub>		47 mg/l	96 hour	Algae	Freshwater
EC <sub>50</sub>		82 mg/l	72 hour	Algae	Freshwater

### Chronic toxicity

#### alkanes, C14-17, chloro

Parameter	Method	Value	Exposure time	Species	Environment
NOEC	OECD 212	3.4 mg/l		Fishes	
NOEC	OECD 202	0.01 mg/l	21 day	Daphnia (Daphnia magna)	

### Diphenylmethane diisocyanate, isomers and homologues

Parameter	Method	Value	Exposure time	Species	Environment
NOEC	OECD 211	≥10 mg/l	21 day	Daphnia (Daphnia magna)	Freshwater

### tris(2-chloro-1-methylethyl) phosphate

Parameter	Method	Value	Exposure time	Species	Environment
NOEC		32 mg/l		Daphnia (Daphnia magna)	Freshwater

## 12.2. Persistence and degradability

### Half-life time

#### Diphenylmethane diisocyanate, isomers and homologues

Route of exposure	Value	Value determination	Source
Air	8 hour		
Drinking water	5 min		
Soil (agricultural)	24 hour		

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### Biodegradability

alkanes, C14-17, chloro

Parameter	Method	Value	Exposure time	Environment	Result
	OECD 301D	13-66 %	28 day		

Diphenylmethane diisocyanate, isomers and homologues

Parameter	Method	Value	Exposure time	Environment	Result
	OECD 302C	0 %	28 hour		Not biodegradable, Persistent

not available

### 12.3. Bioaccumulative potential

Diphenylmethane diisocyanate, isomers and homologues

Parameter	Method	Value	Exposure time	Species	Environment	Temperature [°C]
BCF	OECD 305	200	28 day	Fishes (Cyprinus carpio)	Freshwater	

Data not available.

### 12.4. Mobility in soil

Diphenylmethane diisocyanate, isomers and homologues

Parameter	Value	Environment	Temperature
Log Koc	4.5		20°C

Data not available.

### 12.5. Results of PBT and vPvB assessment

PBT:

alkanes, C14-C17, chloro [CAS: 85535-85-9]

vPvB:

alkanes, C14-C17, chloro [CAS: 85535-85-9]

### 12.6. Endocrine disrupting properties

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

### 12.7. Other adverse effects

The isocyanate reacts with water in the boundary layer to form CO<sub>2</sub> and the solid, insoluble product with high melting point (polyurea). This reaction is strong intensifying in the presence of surface-active agents (e.g., liquid soaps) or water-soluble solvents. According to the experience so far the polyurea is not reactive and does not decompose. The impact of MDI on global warming, reducing the thickness of the layer ozonosphere in the stratosphere or in the accumulation of ozone in the troposphere is not expected.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

#### Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Directive (EU) 2018/852 of the European Parliament and of the Council of 30 May 2018 amending Directive 94/62/EC on packaging and packaging waste.

Waste disposal should be in accordance with local and national legislation.

#### Waste type code

16 05 04 gases in pressure containers (including halons) containing hazardous substances \*

08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances \*

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### Packaging waste type code

- 15 01 01 paper and cardboard packaging  
15 01 10 packaging containing residues of or contaminated by hazardous substances \*  
(\* ) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

### SECTION 14: Transport information

#### 14.1. UN number or ID number

UN 1950

#### 14.2. UN proper shipping name

AEROSOLS

#### 14.3. Transport hazard class(es)

2 Gases

#### 14.4. Packing group

not relevant

#### 14.5. Environmental hazards

No

#### 14.6. Special precautions for user

Always transport closed containers in an upright position, protected against accidental displacement. Do not transport or store in the passenger compartment. Do not leave it in a hot vehicle (risk of explosion). Reference in the Sections 4 to 8.

#### 14.7. Maritime transport in bulk according to IMO instruments

non-applicable

#### Additional information

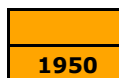
LQ2 release

Hazard identification No.

UN number

Classification code

Safety signs



5F

2.1+dangerous for the environment

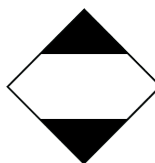


#### Road transport - ADR

Limited quantities

Sign

1 L



#### Air transport - ICAO/IATA

Packaging instructions passenger

203

Cargo packaging instructions

203

#### Marine transport - IMDG

EmS (emergency plan)

F-D, S-U

MFAG

620

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### SECTION 15: Regulatory information

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

1. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 on the registration, evaluation, authorization and restriction of chemicals (REACH) and the creation of a European Chemicals Agency, amending Directive 1999/45 / EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94, as well as Council Directive 76/769 / EEC and Commission Directives 91/155 / EEC, 93/67 / EEC, 93/105 / EC and 2000/21 / EC
2. Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the registration, evaluation, authorization and restriction of chemicals (REACH)
3. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on the classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548 / EEC and 1999/45 / EC and amending Regulation (EC) No 1907/2006 as amended.
4. Act of 20 March 2015 amending the act on chemical substances and mixtures thereof (Journal of Laws of 2015, item 675, as amended).
5. Announcement of the Speaker of the Sejm of the Republic of Poland of November 18, 2020 regarding the publication of a uniform text of the Act on chemical substances and their mixtures (Journal of Laws of 2020, item 2289)
6. The Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018 on the highest allowable concentrations and intensities of factors harmful to health in the work environment
7. Regulation of the Minister of Labor and Social Policy of 4 August 2011 amending the regulation on general provisions on occupational health and safety
8. Announcement of the Speaker of the Sejm of the Republic of Poland of March 19, 2021 regarding the publication of a uniform text of the Act on the carriage of dangerous goods (Journal of Laws of 2021, item 756).
9. Government Declaration of 15 February 2021 on the entry into force of amendments to Annexes A and B to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), done at Geneva on 30 September 1957 (Journal of Laws 2021 item 874).
10. Act of 14 December 2012 on waste with subsequent amendments (Journal of Laws 2013 item 21).
11. Act of 13 June 2013 on the management of packaging and packaging waste as amended (Journal of Laws of 2013, item 888).
12. Regulation of the Minister of the Climate of January 2, 2020 regarding the waste catalogue (Journal of Laws of 2020, item 10)
13. The Regulation of the Minister of Entrepreneurship and Technology of 10 May 2019 repealing the Regulation on the essential requirements for personal protective equipment (Journal of Laws 2019 item 966).
14. Annex XVII. Restrictions on the production, placing on the market and use of certain hazardous substances, preparations and articles - Regulation No 1907/2006 REACH.
15. Regulation of the Minister of Health of February 2, 2011 regarding tests and measurements of factors harmful to health in the work environment (Journal of Laws 2011 No. 33 item 166)
16. Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98 / EC on waste.
17. Directive (EU) 2018/852 of the European Parliament and of the Council of 30 May 2018 amending Directive 94/62 / EC on packaging and packaging waste.
18. Act of 20 July 2017 - Water Law (Journal of Laws 2017 item 1566).

#### 15.2. Chemical safety assessment

An evaluation of chemical safety for ingredients: dimethyl ether; alkanes, C14-C17 chloro; tris(2-chloro-1-methylethyl)phosphate.

### SECTION 16: Other information

#### A list of standard risk phrases used in the safety data sheet

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.
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.

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H362	May cause harm to breast-fed children.
H373	May cause damage to the respiratory tract through prolonged or repeated exposure if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Guidelines for safe handling used in the safety data sheet

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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P271	Use only outdoors or in a well-ventilated area.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
P501	Dispose of contents/container according to applicable regulations.
P260	Do not breathe gas/vapour.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### A list of additional standard phrases used in the safety data sheet

EUH204	Contains isocyanates. May produce an allergic reaction.
EUH066	Repeated exposure may cause skin dryness or cracking.

### Other important information about human health protection

The user is responsible for adherence to all related health protection regulations.

### Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CE <sub>50</sub>	Concentration of a substance when it is affected 50% of the population
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC <sub>50</sub>	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD <sub>50</sub>	Lethal dose of a substance in which it can be expected death of 50% of the population
log K <sub>ow</sub>	Octanol-water partition coefficient
LZO	Volatile organic compounds
MARPOL	International Convention for the Prevention of Pollution from Ships
NOAEC	No observed adverse effect concentration
NOEC	No observed effect concentration

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OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
Press. Gas (Comp.)	Gas under pressure: compressed gas
Press. Gas (Diss.)	Gas under pressure: dissolved gas
Press. Gas (Liq.)	Gas under pressure: liquefied gas
Press. Gas (Ref. Liq.)	Gas under pressure: refrigerated liquefied gas
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UE	European Union
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
vPvB	Very Persistent and very Bioaccumulative
WE	Identification code for each substance listed in EINECS
Acute Tox.	Acute toxicity
Aerosol	Aerosol
Aquatic Acute	Hazardous to the aquatic environment
Aquatic Chronic	Hazardous to the aquatic environment (chronic)
Carc.	Carcinogenicity
Eye Irrit.	Eye irritation
Flam. Gas	Flammable gas
Lact.	Lactation
Press. Gas	Gases under pressure
Resp. Sens.	Respiratory sensitization
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

### Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

### Recommended restrictions of use

not available

### Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

### The changes (which information has been added, deleted or modified)

The version 2.0 replaces the SDS version from 06.12.2020. Changes were made in sections 1-16.

### More information

Classification procedure - calculation method.

### Statement

The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application. The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection.