

18.07.2023

**Kit components**

Product code	Description
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<b>852</b>	<b>PU schuim A+B</b>
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Components:

850	PU schuim component A
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851	PU schuim component B
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**Safety data sheet  
according to 1907/2006/EC, Article 31**

Printing date 18.07.2023

Version number 29 (replaces version 28)

Revision: 12.06.2023

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

#### 1.1 Product identifier

Trade name: **PU schuim component A**

Article number: 850

UFI: KRS0-C06J-H005-6RQX

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

Sector of Use SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites  
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

SU19 Building and construction work

Process category PROC19 Manual activities involving hand contact

Environmental release category ERC5 Use at industrial site leading to inclusion into/onto article

ERC8c Widespread use leading to inclusion into/onto article (indoor)

ERC8f Widespread use leading to inclusion into/onto article (outdoor)

AC13 Plastic articles

Article category  
Application of the substance / the mixture See our technical datasheet for application details of this product.  
Polyurethane casting foam

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: De IJssel Coatings BV, Centrumbaan 960, NL 2841 MH Moordrecht  
Tel: +31 182 372177, E-mail: info@de-ijssel-coatings.nl

Further information obtainable from: Research and Development.

#### 1.4 Emergency telephone number:

De IJssel Coatings BV, Tel. +31 182 372177, E-mail: safety@de-ijssel-coatings.nl  
Office hours: working days from 08:00 to 17:00 hrs.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 The product is not classified, according to the CLP regulation.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

Additional information: EUH210 Safety data sheet available on request.

#### 2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

### \* SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 13674-84-5 EINECS: 237-158-7 Reg.nr.: 01-2119480419-30	tris(2-chlorisopropyl)-phosphate ⚠ Acute Tox. 4, H302; Aquatic Chronic 3, H412	10 – 25%
CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3 Reg.nr.: 01-2119457435-35	1-methoxy-2-propanol ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	2.500%

Additional information: For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

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- After swallowing: If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- Protective equipment: No special measures required.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections** No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

\* **SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- Information about fire - and explosion protection: No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- Storage: Requirements to be met by storerooms and receptacles: Store material in original, tightly closed containers in a cool, well-ventilated area in accordance with applicable (local) regulations. Depending on total volume stored, the storage area should comply with PGS15.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: None.
- Recommended storage temperature: 5 - 30 °C
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

· Ingredients with limit values that require monitoring at the workplace:		
<b>107-98-2 1-methoxy-2-propanol</b>		
IOELV	Short-term value: 568 mg/m <sup>3</sup> , 150 ppm Long-term value: 375 mg/m <sup>3</sup> , 100 ppm Skin	
· DNEL (Derived No Effect Level) for workers		
<b>107-98-2 1-methoxy-2-propanol</b>		
Dermal	Long-term - systemic effects, worker	50.6 mg/kg bw/day (Worker)

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Inhalative	Acute - local effects, worker	553.5 mg/m <sup>3</sup> (Worker)
	Long-term - local effects, worker	369 mg/m <sup>3</sup> (Worker)

· DNEL (Derived No Effect Level) for the general population

**107-98-2 1-methoxy-2-propanol**

Oral	Long-term - systemic effects, general population	3.3 mg/kg bw/day (General population)
Dermal	Acute - systemic effects, general population	18.1 mg/kg bw/day (General population)
Inhalative	Long-term - systemic effects, general population	43.9 mg/m <sup>3</sup> (General population)

· PNEC (Predicted No Effect Concentration) values

**107-98-2 1-methoxy-2-propanol**

Aquatic compartment - freshwater	10 mg/l (Freshwater)
Aquatic compartment - marine water	1 mg/l (Marine water)
Aquatic compartment - water, intermittent releases	100 mg/l (Intermittent release water)
Aquatic compartment - sediment in freshwater	52.3 mg/kg sed dw (Sediment freshwater)
Aquatic compartment - sediment in marine water	5.2 mg/kg sed dw (Sediment marine water)
Terrestrial compartment - soil	4.59 mg/kg dw (Soil)
Sewage treatment plant	100 mg/l (stp)

· Additional information: The lists valid during the making were used as basis.

**8.2 Exposure controls**

- Appropriate engineering controls No further data; see section 7.
- Individual protection measures, such as personal protective equipment
- General protective and hygienic measures: Wash hands before breaks and at the end of work.
- Respiratory protection: Not required.
- Hand protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves: Nitrile rubber, NBR  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.  
Recommended thickness of the material: ≥ 0.3 mm
- Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.  
For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 16523-1:2015: Level 6).
- For the permanent contact gloves made of the following materials are suitable: Butyl rubber, BR  
Fluorocarbon rubber (Viton)  
Nitrile rubber, NBR
- As protection from splashes gloves made of the following materials are suitable: Nitrile rubber, NBR
- Not suitable are gloves made of the following materials: Leather gloves  
Strong material gloves
- Eye/face protection: Goggles recommended during refilling

**\* SECTION 9: Physical and chemical properties**

<b>9.1 Information on basic physical and chemical properties</b>	
· General Information	
· Physical state	Fluid
· Colour:	Light yellow
· Odour:	Characteristic
· Odour threshold:	Not determined.

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· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	Undetermined.
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	> 100 °C (Pensky Martens, ASTM D93)
· Auto-ignition temperature:	> 500 °C
· Decomposition temperature:	Not determined.
· pH at 20 °C	7
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic at 20 °C:	600 mPas (Brookfield, ASTM D1544)
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	0.1 hPa
· Density and/or relative density	
· Density at 20 °C:	1.09 g/cm <sup>3</sup> (DIN 51757, ASTM D 1298)
· Relative density	Not determined.
· Vapour density	Not determined.
<b>· 9.2 Other information</b>	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Organic solvents:	2.5 %
· VOC:	
· VOC (2004/42/EC):	2.50 %
· Solids content:	96.0 %
· Change in condition	
· Evaporation rate	Not determined.
<b>· Information with regard to physical hazard classes</b>	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.

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- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

**\* SECTION 11: Toxicological information**

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- Acute toxicity Based on available data, the classification criteria are not met.
- LD/LC50 values relevant for classification:

Components	Type	Value	Species
<b>13674-84-5 tris(2-chlorisopropyl)-phosphate</b>			
Oral	LD50	3,600 mg/kg (Rat)	
<b>107-98-2 1-methoxy-2-propanol</b>			
Oral	LD50	5,660 mg/kg (Rat)	
Dermal	LD50	13,000 mg/kg (Rabbit)	

- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

· **11.2 Information on other hazards**

· Endocrine disrupting properties
None of the ingredients is listed.

**\* SECTION 12: Ecological information**

- **12.1 Toxicity**
- Aquatic toxicity: No further relevant information available.

Type of test	Effective concentration	Method	Assessment
<b>107-98-2 1-methoxy-2-propanol</b>			
Inhalative	LC50/4 h	25.8 mg/l (Rat)	

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- PBT: Not applicable.
- vPvB: Not applicable.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- Additional ecological information:
- General notes: Not hazardous for water.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

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**Trade name: PU schuim component A**

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- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

**SECTION 14: Transport information**

· <b>14.1 UN number or ID number</b> · ADR/RID/ADN, ADN, IMDG, IATA	Void
· <b>14.2 UN proper shipping name</b> · ADR/RID/ADN, ADN, IMDG, IATA	Void
· <b>14.3 Transport hazard class(es)</b> · ADR/RID/ADN, ADN, IMDG, IATA · Class	Void
· <b>14.4 Packing group</b> · ADR/RID/ADN, ADN, IMDG, IATA	Void
· <b>14.5 Environmental hazards:</b> · Marine pollutant:	No
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· UN "Model Regulation":	Void

**SECTION 15: Regulatory information**

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II	None of the ingredients is listed.
· REGULATION (EU) 2019/1148	
· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))	None of the ingredients is listed.
· Annex II - REPORTABLE EXPLOSIVES PRECURSORS	None of the ingredients is listed.
· Regulation (EC) No 273/2004 on drug precursors	None of the ingredients is listed.
· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors	None of the ingredients is listed.

- National regulations:
- Technical instructions (air):

Class	Share in %
NK	2.5

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H336 May cause drowsiness or dizziness.  
H412 Harmful to aquatic life with long lasting effects.

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- Classification according to Regulation (EC) No 1272/2008      The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
- Department issuing SDS:      Research and Development
- Contact:      Saïda El Asjadi, tel: +31 182 372177, e-mail: [safety@de-ijssel-coatings.nl](mailto:safety@de-ijssel-coatings.nl)
- Date of previous version:      23.03.2021
- Version number of previous version:      28
- Abbreviations and acronyms:      RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organisation  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 3: Flammable liquids – Category 3  
Acute Tox. 4: Acute toxicity – Category 4  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
- Sources:      Literature data and/or investigation reports are available through the manufacturer.
- \* Data compared to the previous version altered.



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

**1.1 Product identifier**

Trade name: **PU schuim component B**

Article number: 851  
 Registration number: 01-2119457014-47  
 UFI: KJS0-AOTR-W006-V2JT

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

Sector of Use: SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites  
 SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
 SU19 Building and construction work  
 Process category: PROC19 Manual activities involving hand contact  
 Environmental release category: ERC5 Use at industrial site leading to inclusion into/onto article  
 ERC8c Widespread use leading to inclusion into/onto article (indoor)  
 ERC8f Widespread use leading to inclusion into/onto article (outdoor)  
 Article category: AC13 Plastic articles  
 Application of the substance / the mixture: See our technical datasheet for application details of this product.  
 Isocyanate hardener for polyurethanes  
 Polyurethane casting foam

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

Manufacturer/Supplier: De IJssel Coatings BV, Centrumbaan 960, NL 2841 MH Moordrecht  
 Tel: +31 182 372177, E-mail: info@de-ijssel-coatings.nl

Further information obtainable from: Research and Development.


**1.4 Emergency telephone number:**

De IJssel Coatings BV, Tel. +31 182 372177, E-mail: safety@de-ijssel-coatings.nl  
 Office hours: working days from 08:00 to 17:00 hrs.

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

 GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 2 H351 Suspected of causing cancer.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

 GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

**2.2 Label elements**

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

   
 GHS07 GHS08

Signal word: Danger

Hazard-determining components of labelling:

diphenylmethane-4,4'-diisocyanate  
 4,4'-methylenediphenyl diisocyanate

Hazard statements

H332 Harmful if inhaled.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H317 May cause an allergic skin reaction.  
 H351 Suspected of causing cancer.  
 H335 May cause respiratory irritation.  
 H373 May cause damage to organs through prolonged or repeated exposure.

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<ul style="list-style-type: none"> <li>· Precautionary statements</li> <li>· Additional information:</li> <li>· <b>2.3 Other hazards</b></li> <li>· Results of PBT and vPvB assessment</li> <li>· PBT:</li> <li>· vPvB:</li> </ul>	<p>P260 Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.</p> <p>P284 [In case of inadequate ventilation] wear respiratory protection.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with local/regional/national/international regulations.</p> <p>EUH204 Contains isocyanates. May produce an allergic reaction. As from 24 August 2023 adequate training is required before industrial or professional use.</p> <p>Not applicable.</p> <p>Not applicable.</p>
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**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 9016-87-9 Reg.nr.: 01-2119457014-47	diphenylmethane-4,4'-diisocyanate ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; C ≥ 5 %	50 – 100%
CAS: 101-68-8 EINECS: 202-966-0 Index number: 615-005-00-9 Reg.nr.: 01-2119457014-47	4,4'-methylenediphenyl diisocyanate ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; C ≥ 5 %	25 – 50%

· Additional information: For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

<ul style="list-style-type: none"> <li>· General information:</li> <li>· After inhalation:</li> <li>· After skin contact:</li> <li>· After eye contact:</li> <li>· After swallowing:</li> <li>· <b>4.2 Most important symptoms and effects, both acute and delayed</b></li> <li>· <b>4.3 Indication of any immediate medical attention and special treatment needed</b></li> </ul>	<p>Immediately remove any clothing soiled by the product.</p> <p>Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.</p> <p>Supply fresh air and to be sure call for a doctor.</p> <p>In case of unconsciousness place patient stably in side position for transportation.</p> <p>Immediately wash with water and soap and rinse thoroughly.</p> <p>Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.</p> <p>If symptoms persist consult doctor.</p> <p>No further relevant information available.</p> <p>No further relevant information available.</p>
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**Trade name: PU schuim component B**

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**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- Protective equipment: Mouth respiratory protective device.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
 Dispose contaminated material as waste according to section 13.  
 Ensure adequate ventilation.
- **6.4 Reference to other sections** See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.  
 See Section 13 for disposal information.

**\* SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.  
 Open and handle receptacle with care.  
 Prevent formation of aerosols.
- Information about fire - and explosion protection: Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- Storage:
- Requirements to be met by storerooms and receptacles: Store material in original, tightly closed containers in a cool, well-ventilated area in accordance with applicable (local) regulations. Depending on total volume stored, the storage area should comply with PGS15.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed.
- Recommended storage temperature: 5 - 30 °C
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **8.1 Control parameters**
- Ingredients with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· DNEL (Derived No Effect Level) for workers		
<b>9016-87-9 diphenylmethane-4,4'-diisocyanate</b>		
Dermal	Acute - systemic effects, worker	50 mg/kg bw/day (Worker)
	Acute - local effects, worker	28,700 µg/cm <sup>2</sup> (Worker)
Inhalative	Acute - systemic effects, worker	0.1 mg/m <sup>3</sup> (Worker)
	Acute - local effects, worker	0.1 mg/m <sup>3</sup> (Worker)
	Long-term - systemic effects, worker	0.05 mg/m <sup>3</sup> (Worker)

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<b>101-68-8 4,4'-methylenediphenyl diisocyanate</b>		
Dermal	Acute - systemic effects, worker	50 mg/kg bw/day (Worker)
	Acute - local effects, worker	28.7 µg/cm <sup>2</sup> (Worker)
	Long-term - systemic effects, worker	50 mg/kg bw/day (Worker)
Inhalative	Acute - systemic effects, worker	0.1 mg/m <sup>3</sup> (Worker)
	Acute - local effects, worker	0.1 mg/m <sup>3</sup> (Worker)
	Long-term - systemic effects, worker	0.05 mg/m <sup>3</sup> (Worker)
	Long-term - local effects, worker	0.05 mg/m <sup>3</sup> (Worker)

· DNEL (Derived No Effect Level) for the general population

<b>9016-87-9 diphenylmethane-4,4'-diisocyanate</b>		
Oral	Acute - systemic effects, general population	20 mg/kg bw/day (General population)
Dermal	Acute - systemic effects, general population	25 mg/kg bw/day (General population)
	Acute - local effects, general population	17,200 µg/cm <sup>2</sup> (General population)
Inhalative	Acute - systemic effects, general population	0.05 mg/m <sup>3</sup> (General population)
	Acute - local effects, general population	0.05 mg/m <sup>3</sup> (General population)
	Long-term - systemic effects, general population	0.0258 mg/m <sup>3</sup> (General population)
	Long-term - local effects, general population	0.025 mg/m <sup>3</sup> (General population)

· PNEC (Predicted No Effect Concentration) values

<b>9016-87-9 diphenylmethane-4,4'-diisocyanate</b>		
Aquatic compartment - freshwater		1 mg/l (Freshwater)
Aquatic compartment - marine water		0.1 mg/l (Marine water)
Aquatic compartment - sediment in freshwater		1 mg/kg sed dw (Sediment freshwater)
Sewage treatment plant		1 mg/l (stp)
<b>101-68-8 4,4'-methylenediphenyl diisocyanate</b>		
Aquatic compartment - freshwater		1 mg/l (Freshwater)
Aquatic compartment - marine water		0.1 mg/l (Marine water)
Terrestrial compartment - soil		1 mg/kg dw (Soil)
Sewage treatment plant		1 mg/l (stp)

· Additional information: The lists valid during the making were used as basis.

**8.2 Exposure controls**

- Appropriate engineering controls No further data; see section 7.
- Individual protection measures, such as personal protective equipment
- General protective and hygienic measures:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Store protective clothing separately.
  - Avoid contact with the eyes and skin.
- Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Hand protection
  - Protective gloves
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves
  - Butyl rubber, BR
  - Fluorocarbon rubber (Viton)
  - Nitrile rubber, NBR
  - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
  - Recommended thickness of the material: ≥ 0.3 mm
- Penetration time of glove material
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 16523-1:2015: Level 6).

- For the permanent contact gloves made of the following materials are suitable:
  - Butyl rubber, BR
  - Fluorocarbon rubber (Viton)
  - Nitrile rubber, NBR
- As protection from splashes gloves made of the following materials are suitable:
  - Nitrile rubber, NBR
- Not suitable are gloves made of the following materials:
  - Leather gloves
  - Strong material gloves
- Eye/face protection
  - Tightly sealed goggles

**\* SECTION 9: Physical and chemical properties**

<b>· 9.1 Information on basic physical and chemical properties</b>	
· General Information	
· Physical state	Fluid
· Colour:	Dark yellow
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	39.5 °C
· Boiling point or initial boiling point and boiling range	208 °C
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	0.4 Vol %
· Upper:	0.0 Vol %
· Flash point:	212 °C (Pensky Martens, ASTM D93)
· Auto-ignition temperature:	520 °C
· Decomposition temperature:	Not determined.
· pH at 20 °C	7
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic at 20 °C:	300 mPas (Brookfield, ASTM D1544)
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density at 20 °C:	1.32 g/cm <sup>3</sup> (DIN 51757, ASTM D 1298)
· Relative density	Not determined.
· Vapour density	Not determined.
<b>· 9.2 Other information</b>	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· VOC:	
· VOC (2004/42/EC):	0.00 %
· Solids content:	100.0 %
· Change in condition	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void

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· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

**\* SECTION 11: Toxicological information**

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- Acute toxicity Harmful if inhaled.
- LD/LC50 values relevant for classification:

Components	Type	Value	Species
<b>9016-87-9 diphenylmethane-4,4'-diisocyanate</b>			
Oral	LD50	10,000 mg/kg	(Rat)
Dermal	LD50	9,400 mg/kg	(Rabbit)
<b>101-68-8 4,4'-methylenediphenyl diisocyanate</b>			
Oral	LD50	2,200 mg/kg	(Mouse)

- Skin corrosion/irritation Causes skin irritation.
- Serious eye damage/irritation Causes serious eye irritation.
- Respiratory or skin sensitisation May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Suspected of causing cancer.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure May cause respiratory irritation.
- STOT-repeated exposure May cause damage to organs through prolonged or repeated exposure.
- Aspiration hazard Based on available data, the classification criteria are not met.

**11.2 Information on other hazards**

· Endocrine disrupting properties	None of the ingredients is listed.
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**\* SECTION 12: Ecological information**

- **12.1 Toxicity**
- Aquatic toxicity: No further relevant information available.

Type of test	Effective concentration	Method	Assessment
<b>ATE (Acute Toxicity Estimates)</b>			
Inhalative	LC50/4 h	0.61 mg/l	
<b>9016-87-9 diphenylmethane-4,4'-diisocyanate</b>			
Inhalative	LC50/4 h	0.49 mg/l	(Rat)

- **12.2 Persistence and degradability** No further relevant information available.

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- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- PBT: Not applicable.
- vPvB: Not applicable.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- Additional ecological information:
- General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- Recommendation: Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP7	Carcinogenic
HP13	Sensitising

- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

**SECTION 14: Transport information**

· <b>14.1 UN number or ID number</b>	
· ADR/RID/ADN, IMDG, IATA	UN2810
· <b>14.2 UN proper shipping name</b>	
· ADR/RID/ADN	2810 TOXIC LIQUID, ORGANIC, N.O.S. (diphenylmethane-4,4'-diisocyanate, 4,4'-methylenediphenyl diisocyanate)
· IMDG, IATA	TOXIC LIQUID, ORGANIC, N.O.S. (diphenylmethane-4,4'-diisocyanate, 4,4'-methylenediphenyl diisocyanate)
· <b>14.3 Transport hazard class(es)</b>	
· ADR/RID/ADN	
· Class	6.1 (T1) Toxic substances.
· Label	6.1
· IMDG, IATA	
· Class	6.1 Toxic substances.
· Label	6.1
· <b>14.4 Packing group</b>	
· ADR/RID/ADN, IMDG, IATA	II
· <b>14.5 Environmental hazards:</b>	
· Marine pollutant:	No
· <b>14.6 Special precautions for user</b>	
· Hazard identification number (Kemler code):	Warning: Toxic substances. 60
· EMS Number:	F-A,S-A
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.

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· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· Transport/Additional information:	
· ADR/RID/ADN	100 ml
· Limited quantities (LQ)	Code: E4
· Excepted quantities (EQ)	Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	100 ml
· Excepted quantities (EQ)	Code: E4 Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (DIPHENYLMETHANE-4,4'-DIISOCYANATE, 4,4'-METHYLENEDIPHENYL DIISOCYANATE), 6.1, II

### SECTION 15: Regulatory information

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 56a, 74

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:

· Technical instructions (air):

Class	Share in %
I	100.0

#### · 15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
 

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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H373 May cause damage to organs through prolonged or repeated exposure.  
EUH204 Contains isocyanates. May produce an allergic reaction.

· Classification according to Regulation (EC) No 1272/2008

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

<p>Acute toxicity - inhalation Skin corrosion/irritation Serious eye damage/irritation Respiratory sensitisation Skin sensitisation Carcinogenicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure)</p>	<p>The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.</p>
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· Department issuing SDS: Research and Development

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· Date of previous version: 28.01.2022

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· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organisation  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Skin Sens. 1: Skin sensitisation – Category 1  
Carc. 2: Carcinogenicity – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2  
Literature data and/or investigation reports are available through the manufacturer.

· Sources:

· \* Data compared to the previous version altered.