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# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.07.2023

Version number 7 (replaces version 6)

Revision: 18.07.2023

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

# 1.1 Product identifier Trade name PU Wood Strengthener

Article number: 2379

**1.2 Relevant identified uses of the substance or mixture and uses advised against** No further relevant information available. **Product category** PC0 Other **Technical function** Other

1.3 Details of the supplier of the safety data sheetManufacturer/Supplier:Remmers GmbHBernhard-Remmers-Str. 13D-49624 Löningen / GermanyTel.: +49(0)5432/83-0Fax: +49(0)5432/3985Information department:Product Safety department: Phone: +44 (0) 1293 594 010Email: sales@remmers.co.ukk

Remmers (UK) Limited Unit 4 , Lloyds Court Manor Royal, Crawley – West Sussex RH10 9QU fon +44 (0) 1293 594 010 fax +44 (0) 1293 594 037

# 1.4 Emergency telephone number:

National Poisons Information Service (NPIS): In England and Wales: NHS 111 - dial 111 In Scotland: NHS 24 - dial 111

24h-Transport Emergency Contact Phone Number: within USA and Canada: 1-800-424-9300 outside USA and Canada: 001-703-527-3887

**SECTION 2: Hazards identification** 

## 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4	H332 Harmful if inhaled.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Resp. Sens. 1	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Carc. 2	H351 Suspected of causing cancer.
STOT SE 3	H335 May cause respiratory irritation.
STOT RE 2	H373 May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1	H304 May be fatal if swallowed and enters airways.
Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects.
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# 2.2 Label elements

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

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

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Hazard pictograms



# Signal word Danger

# Hazard-determining components of labelling:

4,4'-methylenediphenyl diisocyanate Hydrocarbons, C10, aromatics, >1% naphthalene diphenylmethane-2,4'-diisocyanate diphenylmethanediisocyanate,isomeres and homologues 2,2'-methylenediphenyl diisocyanate hexamethylene diisocyanate, oligomers 4-isocyanatosulphonyltoluene hexamethylene-di-isocyanate isophthaloyl dichloride

## 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.

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

# Precautionary statements

P260 Do not breathe mist/vapours/spray.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P331 Do NOT induce vomiting.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P391 Collect spillage.

# Additional information:

EUH204 Contains isocyanates. May produce an allergic reaction.

As from 24 August 2023 adequate training is required before industrial or professional use. **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 the substances listed below with harmless additions.

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Dangerous components [% w/w]:				
CAS: 101-68-8 EINECS: 202-966-0 Index number: 615-005-00-9 Reg.nr.: 01-2119457014-47- XXXX	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: $C \ge 5\%$ Skin Irrit. 2; H315: $C \ge 5\%$ Resp. Sens. 1; H334: $C \ge 0.1\%$ STOT SE 3; $C \ge 5\%$	≥20-<30%		
CAS: 5873-54-1 EINECS: 227-534-9 Index number: 615-005-00-9 Reg.nr.: 01-2119480143-45- XXXX	diphenylmethane-2,4'-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 %	≥20-<30%		
EC number: 919-284-0 Reg.nr.: 01-2119463588-24- XXXX	Hydrocarbons, C10, aromatics, >1% naphthalene Carc. 2, H351; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336	≥10-<20%		
EC number: 939-340-8 Reg.nr.: 01-2119970543-34- XXXX	hexamethylene diisocyanate, oligomers Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335, EUH204	≥10-<20%		
CAS: 9016-87-9	diphenylmethanediisocyanate,isomeres and homologues 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: $C \ge 5\%$ Skin Irrit. 2; H315: $C \ge 5\%$ Resp. Sens. 1; H334: $C \ge 0.1\%$ STOT SE 3; $C \ge 5\%$	≥10-<20%		
CAS: 91-20-3 EINECS: 202-049-5 Index number: 601-052-00-2	naphthalene Carc. 2, H351; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302	≥1-<2.5%		
CAS: 2536-05-2 EINECS: 219-799-4 Index number: 615-005-00-9 Reg.nr.: 01-2119927323-43- XXXX	2,2'-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: $C \ge 5\%$ Skin Irrit. 2; H315: $C \ge 5\%$ Resp. Sens. 1; H334: $C \ge 0.1\%$ STOT SE 3; $C \ge 5\%$	≥1-<2.5%		

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CAS: 4083-64-1 EINECS: 223-810-8 Index number: 615-012-00-7 Reg.nr.: 01-2119980050-47- XXXX	4-isocyanatosulphonyltoluene Resp. Sens. 1, H334; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335, EUH014, EUH204 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5% STOT SE 3; H335: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 %	( <u>Contd. of page 3)</u> ≥0.5-<1%
CAS: 99-63-8 EINECS: 202-774-7 Reg.nr.: 01-2119493993-19- XXXX	isophthaloyl dichloride Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	≥0.1-≤0.25%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1 Reg.nr.: 01-2119457571-37- XXXX	hexamethylene-di-isocyanate Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Resp. Sens. 1; H334: C≥ 0.5 % Skin Sens. 1; H317: C ≥ 0.5 %	≥0.05-<0.1%

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

#### **General information**

If symptoms occur or in case of doubt, seek medical attention. In case of unconsciousness, do not administer anything orally.

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

### After inhalation

Take affected persons into the open air and position comfortably

In case of respiratory tract or mucous membrane irritation (e.g. tussive irritation), if you feel unwell or prolonged exposure, seek medical attention.

Supply fresh air and call for doctor for safety reasons.

In case of unconsciousness bring patient into stable side position for transport.

#### After skin contact

Remove product mechanically; wash thoroughly with plenty of soap and water.

Wash immediately with water and soap and rinse thoroughly.

# After eye contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

#### After swallowing

Do not induce vomiting. In case of prolonged discomfort, see a doctor. If the patient is conscious, give water to drink.

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

Excessive contact with skin, eyes or respiratory system may cause irritation.

# Danger

Swallowing followed by vomiting may lead to aspiration into the lungs which leads to suffocation or toxic pulmonary oedema.

Long-term or repeated exposure may cause inflammation of the skin (dermatitis).

**4.3 Indication of any immediate medical attention and special treatment needed** symptomatic treatment

To avoid dermatitis (skin inflammation), use skin cream.

**SECTION 5: Firefighting measures** 

# 5.1 Extinguishing media

# Suitable extinguishing agents

Foam

Water spray jet

Dry extinguishing agents, carbon dioxide, sand or earth should only be used for small fires.

5.2 Special hazards arising from the substance or mixture

May be released in case of fire Carbon monoxide (CO)

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(Contd. of page 4) Nitrogen oxides (NOx) Isocyanate fumes Hydrogen cyanide (HCN) (Traces) further harmful conflagration gases and fumes When heated above the flash point, the formation of ignition-capable mixtures is possible. Formation of poisonous gases during heating or in fires. 5.3 Advice for firefighters **Protective equipment:** Wear self-contained breathing apparatus. Wear full protective suit. Put on breathing apparatus. Additional information Cool endangered containers with water spray jet. Collect contaminated fire fighting water separately. It must not enter drains. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. SECTION 6: Accidental release measures 6.1 Personal precautions, protective equipment and emergency procedures

Keep away from ignition sources

Ensure adequate ventilation

Put on breathing apparatus.

# 6.2 Environmental precautions:

Do not allow to enter the ground/soil.

Do not allow product to reach sewage system or water bodies.

Inform responsible authorities in case product reaches bodies of water or sewage system.

# 6.3 Methods and material for containment and cleaning up:

Remove mechanically: Cover remains with damp, liquid-binding material (e.g. sawdust, chemical binders on a calcium silicate-hydrate base, sand). After approx. 1 hour, take up and place in refuse container. Do not close (CO2-development!) Keep damp and allow to stand in a safe place outdoors for several days.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to item 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 information on disposal.

# **SECTION 7: Handling and storage**

# 7.1 Precautions for safe handling

Use only in well ventilated areas. Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air). Ensure good ventilation/exhaust in workplaces. Avoid the formation of aerosols.

Information about protection against explosions and fires:

Fumes can combine with air to form an explosive mixture. Keep breathing equipment ready.

7.2 Conditions for safe storage, including any incompatibilities Storage

Requirements to be met by storerooms and containers: Ventilate storage and work rooms sufficiently. Prevent any penetration into the ground. Information on storage in a common storage facility: none Further information about storage conditions: Store container in a well ventilated position. Protect from humidity and keep away from water.

Protect from frost.

Keep container tightly closed.

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SECTION 8: Exposure controls/personal protection					
8.1 Control parameters					
Components with limit values that require monitoring at the workplace:					
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate					
WEL Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO					
CAS: 5873-54-1 diphenylmethane-2,4'-diisocyanate					
WEL Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO					
CAS: 9016-87-9 diphenylmethanediisocyanate, isomeres and homologues					
WEL Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO					
CAS: 2536-05-2 2,2'-methylenediphenyl diisocyanate					
WEL Short-term value: 0.07 mg/m³ Long-term value: 0.02 mg/m³ Sen; as -NCO					
CAS: 4083-64-1 4-isocyanatosulphonyltoluene					
WEL Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO					
CAS: 822-06-0 hexamethylene-di-isocyanate					
WEL Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO					
Ingredients with biological limit values:					
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate					
BMGV 1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine					
CAS: 5873-54-1 diphenylmethane-2,4'-diisocyanate					
BMGV 1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine					
CAS: 2536-05-2 2,2'-methylenediphenyl diisocyanate					
BMGV 1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine					
CAS: 822-06-0 hexamethylene-di-isocyanate					
BMGV 1 μmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine Additional information: The lists that were valid during compilation were used as a basis.					

# 8.2 Exposure controls

# Appropriate engineering controls

In workshops in which isocyanate aerosols and/or fumes can occur in higher concentrations, exceeding hygienic workplace limits must be prevented by deliberate air extraction. The air must be moved away from the persons.

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#### Individual protection measures, such as personal protective equipment General protective and hygienic measures

Do not eat, drink or smoke while working.

Apply solvent-resistant skin protection preparation before beginning work.

The handling of this product ist not recommended for persons with respiratory system and skin

hypersensitivity (asthma, chronic bronchitis, chronic skin disease).

Keep away from food, beverages and animal feed.

Immediately remove soiled, saturated clothing.

Wash hands before pauses and after work. Store protective clothing separately.

Do not inhale gases / vapours / aerosols.

Avoid contact with eyes and skin.

The following indication regarding the personal protective equipment are to be considered as suggestions. The selection of the necessary personal protective equipment is to be evalutated by the employer depending on the types of operations and the local circumstances. If a risk assessment onsite shows that there is no risk for employees, the personal protective euiqment is not required or the amount of the PPE can be adpated accordingly.

## **Respiratory equipment:**

Short term filter device:

Filter A/P2.

In case of brief exposure or low pollution load, use respiratory protection equipment with filter. In case of intensive or longer exposure, use self-contained respiratory protection equipment.

#### Hand protection

Solvent resistant gloves

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. 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.

#### Penetration time of glove material

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

# Eye/face protection

Face protection

Tightly sealed safety glasses. **Body protection:** Protective work clothing.

**SECTION 9: Physical and chemical properties** 

9.1 Information on basic physical and chemical properties General Information				
Physical state	Fluid			
Colour:	Brown			
Odour:	Characteristic			
Odour threshold:	Not determined.			
Melting point/freezing point:	Not determined			
Boiling point or initial boiling point and boiling				
range	185 °C			
Flammability	Not applicable.			
Lower and upper explosion limit				
Lower:	Not determined.			
Upper:	Not determined.			
Flash point:	> 61 °C			

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Ignition temperature:	not applicable
Decomposition temperature:	Not determined.
pH	Not determined.
Viscosity:	
Kinematic viscosity	Not determined.
dynamic:	Not determined.
Solubility	Not determined.
Water:	Not miscible or difficult to mix
Partition coefficient n-octanol/water (log value	
Vapour pressure:	Not determined.
Density and/or relative density	Not determined.
Density at 20 °C:	$1.12 \mathrm{a/cm^3}$
Relative density	1.12 g/cm³ Not determined.
	Not determined.
Vapour density	
9.2 Other information	
Appearance:	
Form:	Fluid
Important information on protection of health	
and environment, and on safety.	
Explosive properties:	Product is not explosive.
Solvent separation test	< 3 %
Change in condition	
Evaporation rate	Not determined.
Evaporation rate	Not determined.
Evaporation rate Information with regard to physical hazard	Not determined.
Evaporation rate Information with regard to physical hazard classes	
Evaporation rate Information with regard to physical hazard classes Explosives	Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases	Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols	Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases	Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure	Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids	Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids	Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures	Void Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures Pyrophoric liquids	Void Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures Pyrophoric liquids Pyrophoric solids	Void Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures	Void Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit	Void Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit flammable gases in contact with water	Void Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixt	Void Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit flammable gases in contact with water Oxidising liquids Oxidising solids	Void Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit flammable gases in contact with water Oxidising liquids Oxidising solids Oxidising solids Organic peroxides	Void Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit flammable gases in contact with water Oxidising liquids Oxidising solids Organic peroxides Corrosive to metals	Void Void Void Void Void Void Void Void
Evaporation rate Information with regard to physical hazard classes Explosives Flammable gases Aerosols Oxidising gases Gases under pressure Flammable liquids Flammable solids Self-reactive substances and mixtures Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which emit flammable gases in contact with water Oxidising liquids Oxidising solids Oxidising solids Organic peroxides	Void Void Void Void Void Void Void 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 handled and stored according to specifications.

Avoid: heat, flames, sparks

10.3 Possibility of hazardous reactions

Exothermic reaction with amines and alcohols.

With water carbon dioxide development, pressure build-up in closed containers.

Danger of bursting

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials:

Amines Alcohols

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10.6	Haza	ardous	deco	mposition	products:

None if used properly. None if stored properly.

**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 that are relevant for classification:				
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate				
Oral	LD50	>15,000 mg/kg (rat)		
Inhalative	LC50/4 h	~0.49 mg/l (rat)		
Hydrocarl	Hydrocarbons, C10, aromatics, >1% naphthalene			
Oral	LD50	>2,000 mg/kg (rat)		
Dermal	LD50	>2,000 mg/kg (rabbit)		
Inhalative	LC50/4 h	>4.778 mg/l (rat)		
hexameth	hexamethylene diisocyanate, oligomers			
Oral	LD50	>2,500 mg/kg (rat)		
Dermal	LD50	>2,000 mg/kg (rat)		
CAS: 9016	CAS: 9016-87-9 diphenylmethanediisocyanate, isomeres and homologues			
Oral	LD50	>10,000 mg/kg (rat)		
Dermal	LD50	>9,400 mg/kg (rabbit)		
Inhalative	ive LC50/4 h 1.5 mg/l (rat)			
Skin corro	Skin corrosion/irritation: Causes skin irritation.			

# Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye irritation.

# 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: May be fatal if swallowed and enters airways.

# Experience with humans:

After swallowing and subsequent vomiting, aspiration into the lungs may occur which leads to suffocation or toxic lung oedema.

Frequent or longer lasting skin contact may degrease and dry out skin which may lead to skin irritation and inflammation (dermatitis).

Additional toxicological information:

Special characteristics/effects of isocyanates:

In case of over-exposure - especially when spraying isocyanate based varnishes without protective measures - there is a danger of a concentration-dependent, irritating effect on eyes, nose, throat, and respiratory tract. The delayed appearance of symptoms and the development of hypersensitivity (trouble breathing, cough, asthma) are possible. For hypersensitive persons, reactions may be triggered by very low isocyanate concentrations, also below the TLV value. In case of prolonged contact with skin, tanning and irritating effects are possible.

# 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.

- **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.

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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
Remark: Toxic for fish
Additional ecological information:
General notes:
Do not allow product to reach ground water, bodies of water or sewage system.
Hazardous to drinking water even if small quantities leak into soil.
Also toxic for fish and plankton in bodies of water.
Toxic for aquatic organisms

**SECTION 13: Disposal considerations** 

#### Recommendation

Not hardened material must be disposed of as hazardous waste according to official regulations. Hardened product remains may be disposed of as building rubble or put into household garbage. The given refuse codes are recommendations based upon the intended use of the product. Because of special use and disposal conditions at the user's, other codes may apply under other conditions.

## European waste catalogue

08 05 01\* waste isocyanates

# Uncleaned packaging:

#### **Recommendation:**

Disposal must be made according to official regulations. Packaging can be reused or recycled after cleaning.

SECTION 14: Transport information			
14.1 UN number or ID number ADR, ADN, IMDG, IATA	Void		
14.2 UN proper shipping name ADR, ADN, IMDG, IATA	Void		
14.3 Transport hazard class(es)			
ADR, ADN, IMDG, IATA Class	Void		
14.4 Packing group ADR, IMDG, IATA	Void		
14.5 Environmental hazards: Marine pollutant:	No		
14.6 Special precautions for user	Not applicable.		
14.7 Maritime transport in bulk according to         IMO instruments       Not applicable.			
Transport/Additional information:	Not a hazardous good according to the above regulations.		
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. Seveso category E2 Hazardous to the Aquatic Environment Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t

according to 1907/2006/EC, Article 31

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Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 56a, 56b, 56c, 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.

#### National regulations

#### Other regulations, limitations and prohibition ordinances

From the European Committee of the Associations for varnish, printing ink and artistry paint producers - CEPE - the following information is given for isocyanate based coating materials:

Ready-to-use coating materials that contain isocyanates may have an irritating effect on mucous membranes - especially on respiratory organs - and cause hypersensitivity reactions. There is a risk of sensitization if vapours or sprayed mist are inhaled. When handling isocyanate based coating materials, all measures for solvent based coating materials must be strictly observed. Sprayed mist and vapours especially should not be inhaled.

Persons with allergies or asthma who have a tendency for respiratory tract ailments should not be allowed to work with isocyanate based coating materials.

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

## **SECTION 16: Other information**

This data is based on our present state of knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship. Delivery specifications are found in the respective Technical Information Sheets.

#### **Relevant phrases**

- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- EUH014 Reacts violently with water.

EUH204 Contains isocyanates. May produce an allergic reaction.

Classification according to Regulation (EC) No 1272/2008 Calculation method

# Department issuing data specification sheet: Product Safety department / EHS

Date of previous version: 07.12.2022

#### Version number of previous version: 6

#### Abbreviations and acronyms:

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)

LC50: Lethal concentration, 50 percent

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# Safety data sheet

according to 1907/2006/EC, Article 31

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LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Acute Tox. 2: Acute toxicity – Category 2 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 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 Asp. Tox. 1: Aspiration hazard – Category 1 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2