

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

Product form : Mixture
Trade name : PU Construction Adhesive Tr

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Intended for general public
Main use category : Consumer use, Professional use
Use of the substance/mixture : Adhesives, binding agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Soudal N.V. N.V.
Everdongenlaan 18-20
2300 Turnhout
Belgium
T +32 14 42 42 31 - F +32 14 42 65 14
sds@soudal.com - www.Soudal.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Belgium	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Militaire Reine Astrid	Rue Bruyn 1 1120 Bruxelles/Brussels	+32 70 245 245	Please dial: 070 245 245 for any urgent questions about intoxication (free of charge 24/7), if not accessible, dial: 02 264 96 30 (standard fee)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318
Respiratory sensitisation, Category 1 H334
Skin sensitisation, Category 1 H317
Carcinogenicity, Category 2 H351
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation H335

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

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS07

GHS08

Signal word (CLP) :

Danger

Contains :

polymethylene polyphenyl isocyanate, 4,4'-methylenediphenyl diisocyanate, calcium oxide

Hazard statements (CLP) :

H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
H351 - Suspected of causing cancer.

Precautionary statements (CLP) :

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
P264 - Wash hands thoroughly after handling.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Extra phrases :

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.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
calcium oxide (1305-78-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
polymethylene polyphenyl isocyanate (9016-87-9)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
4,4'-methylenediphenyl diisocyanate (101-68-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
propylene carbonate (108-32-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
calcium oxide substance with national workplace exposure limit(s) (BE); substance with a Community workplace exposure limit	CAS-No.: 1305-78-8 EC-No.: 215-138-9	≥ 10 – < 25	Eye Dam. 1, H318 Skin Irrit. 2, H315 STOT SE 3, H335
polymethylene polyphenyl isocyanate	CAS-No.: 9016-87-9	> 1 - < 5	Carc. 2, H351 Resp. Sens. 1, H334 Skin Sens. 1, H317 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
4,4'-methylenediphenyl diisocyanate substance with national workplace exposure limit(s) (BE)	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-47	> 3 - < 5	Carc. 2, H351 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317
hydrocarbons, C10-C12, isoalkanes, <2% aromatics	EC-No.: 923-037-2 REACH-no: 01-2119471991-29	≥ 1 – < 5	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
propylene carbonate	CAS-No.: 108-32-7 EC-No.: 203-572-1 EC Index-No.: 607-194-00-1 REACH-no: 01-2119537232-48	≥ 1 – < 5	Eye Irrit. 2, H319

Specific concentration limits:

Name	Product identifier	Specific concentration limits
4,4'-methylenediphenyl diisocyanate	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-47	(0,1 ≤C ≤ 100) Resp. Sens. 1, H334 (5 ≤C ≤ 100) Eye Irrit. 2, H319 (5 ≤C ≤ 100) Skin Irrit. 2, H315 (5 ≤C ≤ 100) STOT SE 3, H335

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Respiratory problems: consult a doctor/medical service. Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth out with water. Do NOT induce vomiting. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: Dry/sore throat. Cough. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: Irritation of the gastric/intestinal mucosa.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: On burning: release of carbon monoxide - carbon dioxide. Nitrous fumes.
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5.3. Advice for firefighters

Firefighting instructions	: Cool closed containers exposed to fire with water spray. Do not allow water to enter the vessels, a violent reaction may occur. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: No open flames. No smoking.
6.1.1. For non-emergency personnel	
Emergency procedures	: Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes.
6.1.2. For emergency responders	
Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: Shovel or sweep up and put in a closed container for disposal. Clean contaminated surfaces with a soap solution. Wash clothing and equipment after handling.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe vapours. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Keep away from naked flames/heat. Keep only in original container.
- Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed.
- Incompatible materials : Heat sources.
- Packaging materials : Synthetic material.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

4,4'-methylenediphenyl diisocyanate (101-68-8)	
Belgium - Occupational Exposure Limits	
Local name	4,4'-Diisocyanate de diphénylméthane (MDI) # Difenylnmethaan-4,4'-di-isocyanaat (MDI)
OEL TWA	0,052 mg/m ³
OEL TWA [ppm]	0,005 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 19/11/2020
calcium oxide (1305-78-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Calcium oxide
IOEL TWA	1 mg/m ³ (Respirable fraction)
IOEL STEL	4 mg/m ³ (Respirable fraction)
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
Belgium - Occupational Exposure Limits	
Local name	Calcium (oxyde de) (fraction alvéolaire) # Calciumoxide (inadembare fractie)
OEL TWA	1 mg/m ³
OEL STEL	4 mg/m ³
Regulatory reference	Koninklijk besluit/Arrêté royal 19/11/2020

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

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8.1.4. DNEL and PNEC

4,4'-methylenediphenyl diisocyanate (101-68-8)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	0,1 mg/m ³
Long-term - local effects, inhalation	0,05 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	0,05 mg/m ³
Long-term - local effects, inhalation	0,025 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	1 mg/l
PNEC aqua (marine water)	0,1 mg/l
PNEC (Soil)	
PNEC soil	1 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	1 mg/l
calcium oxide (1305-78-8)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	200 mg/kg bodyweight/day
Acute - systemic effects, inhalation	32 mg/m ³
Acute - local effects, dermal	3,94 mg/cm ²
Acute - local effects, inhalation	4 mg/m ³
Long-term - systemic effects, dermal	5 mg/kg bodyweight/day
Long-term - local effects, dermal	3,94 mg/cm ²
Long-term - systemic effects, inhalation	1,7 mg/m ³
Long-term - local effects, inhalation	1 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	100 mg/kg bodyweight/day
Acute - systemic effects, inhalation	16 mg/m ³
Acute - systemic effects, oral	10 mg/kg bodyweight/day
Acute - local effects, dermal	1,97 mg/cm ²
Acute - local effects, inhalation	4 mg/m ³
Long-term - systemic effects, oral	10 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0,85 mg/m ³
Long-term - systemic effects, dermal	2,5 mg/kg bodyweight/day
Long-term - local effects, dermal	1,97 mg/cm ²
Long-term - local effects, inhalation	1 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0,37 mg/l
PNEC aqua (marine water)	0,24 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l

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calcium oxide (1305-78-8)	
PNEC (Sediment)	
PNEC sediment (freshwater)	37,5 mg/kg dwt
PNEC sediment (marine water)	660 mg/kg dwt
PNEC (Soil)	
PNEC soil	817,4 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	89,6 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	2,27 mg/l
propylene carbonate (108-32-7)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	20 mg/kg bodyweight/day
Long-term - local effects, dermal	10 mg/m ³
Long-term - systemic effects, inhalation	70,53 mg/m ³
Long-term - local effects, inhalation	20 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	10 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	17,4 mg/m ³
Long-term - systemic effects, dermal	10 mg/kg bodyweight/day
Long-term - local effects, inhalation	10 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0,9 mg/l
PNEC aqua (marine water)	0,09 mg/l
PNEC aqua (intermittent, freshwater)	9 mg/l
PNEC (Soil)	
PNEC soil	0,81 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	7400 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Measure concentrations regularly, and at the time of any change occurring in conditions likely to have consequences on workers exposure.

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8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or face shield

8.2.2.2. Skin protection

Skin and body protection:

Protective clothing (EN 14605 or EN 13034)

Hand protection:

Protective gloves against chemicals (EN 374)

8.2.2.3. Respiratory protection

Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Various colours.
Appearance	: Pasty.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 100 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 1,47 kg/l (20°C)
Relative density	: 1,47 (20°C)
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : 2,32 – 2,54 % (34.09 - 37.26 g/l)

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Keep away from heat.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

polymethylene polyphenyl isocyanate (9016-87-9)	
LD50 oral rat	> 10000 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Literature study, Dermal)
LC50 Inhalation - Rat	10 – 20 mg/l/4h
4,4'-methylenediphenyl diisocyanate (101-68-8)	
LD50 oral rat	> 2000 mg/kg bodyweight (Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rabbit	> 9400 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal, 14 day(s))
LC50 Inhalation - Rat	0,49 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Read-across, Inhalation (aerosol), 14 day(s))
calcium oxide (1305-78-8)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2500 mg/kg bodyweight (EU Method B.3: Acute toxicity (dermal), 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))

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calcium oxide (1305-78-8)	
LC50 Inhalation - Rat	> 6,04 mg/l (OECD 436: Acute inhalation toxicity-acute toxic class method, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 15 day(s))
propylene carbonate (108-32-7)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
Skin corrosion/irritation	: Causes skin irritation.
4,4'-methylenediphenyl diisocyanate (101-68-8)	
pH	7 (6.8E-3 g/l, 25 °C)
calcium oxide (1305-78-8)	
pH	12,5 (0.13 %, 20 °C)
propylene carbonate (108-32-7)	
pH	7 (20 %, 20 °C)
Serious eye damage/irritation	: Causes serious eye damage.
4,4'-methylenediphenyl diisocyanate (101-68-8)	
pH	7 (6.8E-3 g/l, 25 °C)
calcium oxide (1305-78-8)	
pH	12,5 (0.13 %, 20 °C)
propylene carbonate (108-32-7)	
pH	7 (20 %, 20 °C)
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
polymethylene polyphenyl isocyanate (9016-87-9)	
STOT-single exposure	May cause respiratory irritation.
4,4'-methylenediphenyl diisocyanate (101-68-8)	
STOT-single exposure	May cause respiratory irritation.
calcium oxide (1305-78-8)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
polymethylene polyphenyl isocyanate (9016-87-9)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure (if inhaled).
4,4'-methylenediphenyl diisocyanate (101-68-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

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calcium oxide (1305-78-8)	
LOAEL (oral, rat, 90 days)	300 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0,413 mg/l air Animal: rat, Animal sex: male, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

propylene carbonate (108-32-7)	
NOAEL (oral, rat, 90 days)	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard : Not classified

4,4'-methylenediphenyl diisocyanate (101-68-8)	
Viscosity, kinematic	Not applicable (solid)

calcium oxide (1305-78-8)	
Viscosity, kinematic	Not applicable (solid)

propylene carbonate (108-32-7)	
Viscosity, kinematic	No data available in the literature

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Not rapidly degradable

polymethylene polyphenyl isocyanate (9016-87-9)	
LC50 - Other aquatic organisms [1]	> 1000 mg/l (96 h, Literature study)

4,4'-methylenediphenyl diisocyanate (101-68-8)	
LC50 - Fish [1]	> 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration)
EC50 - Crustacea [1]	129,7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect)
ErC50 algae	> 1640 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Read-across, GLP)

calcium oxide (1305-78-8)	
LC50 - Fish [1]	50,6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Read-across, GLP)
EC50 - Crustacea [1]	49,1 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect)
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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calcium oxide (1305-78-8)	
EC50 96h - Algae [1]	1130,3 mg/l Test organisms (species): Navicula seminulum
ErC50 algae	184,57 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Read-across, GLP)
NOEC chronic fish	100 mg/l Test organisms (species): other:Tilapia nilotica Duration: '46 d'

propylene carbonate (108-32-7)	
LC50 - Fish [1]	> 1000 mg/l Test organisms (species): Cyprinus carpio
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 929 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 929 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

polymethylene polyphenyl isocyanate (9016-87-9)	
Persistence and degradability	not readily degradable in water.

4,4'-methylenediphenyl diisocyanate (101-68-8)	
Persistence and degradability	not readily degradable in water.

calcium oxide (1305-78-8)	
Persistence and degradability	Biodegradability: not applicable.

propylene carbonate (108-32-7)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0,046 g O ₂ /g substance
Chemical oxygen demand (COD)	1,29 g O ₂ /g substance

12.3. Bioaccumulative potential

polymethylene polyphenyl isocyanate (9016-87-9)	
BCF - Fish [1]	1 (Pisces, Literature study)
Partition coefficient n-octanol/water (Log Pow)	10,46 (Calculated, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

4,4'-methylenediphenyl diisocyanate (101-68-8)	
BCF - Fish [1]	92 – 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 4 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, GLP)
Partition coefficient n-octanol/water (Log Pow)	4,51 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

calcium oxide (1305-78-8)	
Bioaccumulative potential	Not bioaccumulative.

propylene carbonate (108-32-7)	
Partition coefficient n-octanol/water (Log Pow)	-0,48 – -0,41 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

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12.4. Mobility in soil

polymethylene polyphenyl isocyanate (9016-87-9)

Organic Carbon Normalized Adsorption Coefficient (Log Koc)	9,078 – 10,597 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.

4,4'-methylenediphenyl diisocyanate (101-68-8)

Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4,53 – 5,455 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Product adsorbs onto the soil.

calcium oxide (1305-78-8)

Ecology - soil	No (test)data on mobility of the substance available.
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propylene carbonate (108-32-7)

Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0,81 (log Koc, QSAR)
Ecology - soil	Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Collect all waste in suitable and labelled containers and dispose according to local legislation.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Do not discharge into drains or the environment.
Ecology - waste materials	: Avoid release to the environment.
European List of Waste (LoW) code	: 08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances 15 01 10* - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID /

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

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ADR	IMDG	IATA	ADN	RID
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	hydrocarbons, C10-C12, isoalkanes, <2% aromatics	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	PU Construction Adhesive Tr ; hydrocarbons, C10-C12, isoalkanes, <2% aromatics ; polymethylene polyphenyl isocyanate ; propylene carbonate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	hydrocarbons, C10-C12, isoalkanes, <2% aromatics	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

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EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
56.	polymethylene polyphenyl isocyanate ; 4,4'-methylenediphenyl diisocyanate	Methylenediphenyl diisocyanate (MDI)
56(a)	polymethylene polyphenyl isocyanate ; 4,4'-methylenediphenyl diisocyanate	Methylenediphenyl diisocyanate (MDI) isomers: 4,4'-Methylenediphenyl diisocyanate
56(b)	polymethylene polyphenyl isocyanate	Methylenediphenyl diisocyanate (MDI) isomers: 2,4'-Methylenediphenyl diisocyanate
56(c)	polymethylene polyphenyl isocyanate	Methylenediphenyl diisocyanate (MDI) isomers: 2,2'-Methylenediphenyl diisocyanate
74.	polymethylene polyphenyl isocyanate ; 4,4'-methylenediphenyl diisocyanate	Diisocyanates, $O = C=N-R-N = C=O$, with R an aliphatic or aromatic hydrocarbon unit of unspecified length

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

VOC Directive (2004/42)

VOC content : 2,32 – 2,54 % (34.09 - 37.26 g/l)

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878		

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number

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Abbreviations and acronyms:	
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method
Resp. Sens. 1	H334	Calculation method
Skin Sens. 1	H317	Calculation method
Carc. 2	H351	Calculation method
STOT SE 3	H335	Calculation method

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.