

# Polyurethane adhesive sealant

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 10/20/2022 Revision date: 10/20/2024 Version: 2.0

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

#### 1.1. Product identifier

Product form : Mixture  
Trade name : Polyurethane adhesive sealant  
Code : FLEX580

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : For bonding and sealing

##### 1.2.2. Uses advised against

Restrictions on use : No information available

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

##### Supplier

Shanghai Rhexe Chemicals Co.,Ltd  
Room 1102, building 9, no.99, Tianzhou road, Shanghai  
200233  
T 0086 21 54937114  
online@aphysbond.com

##### Importer

#### 1.4. Emergency telephone number

Emergency number : 021-22816958

### SECTION 2: Hazards identification

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

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

Respiratory sensitisation, Category 1 H334  
Full text of H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

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

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements (CLP) :

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P284 - Wear respiratory protection.  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements :

None.

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### 2.3. Other hazards

Other hazards which do not result in classification : No information available.

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

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

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Propanol, [(1-methyl-1,2-ethanediyl)bis(oxy)]bis-, polymer with 1,1'-methylenebis[isocyanatobenzene] and oxybis[propanol]	CAS-No.: 68092-58-0	35 – 50	Not classified
Carbon black	CAS-No.: 1333-86-4 EC-No.: 215-609-9;435-640-3	0 – 0.9	Not classified
Diisodecyl phthalate	CAS-No.: 26761-40-0 EC-No.: 247-977-1	18.5 – 25.5	Not classified
Carbonic acid, calcium salt (1:1)	CAS-No.: 471-34-1 EC-No.: 207-439-9	10 – 25.0	Not classified
4,4'-Methylenediphenyl diisocyanate	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9	< 0.9	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373

### 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	( 0.1 $\leq$ C < 100) Resp. Sens. 1, H334 ( 5 $\leq$ C < 100) Eye Irrit. 2, H319 ( 5 $\leq$ C < 100) Skin Irrit. 2, H315 ( 5 $\leq$ 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 : IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.

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First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## 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 water jet since it may cause the fire to spread.

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

Hazardous decomposition products in case of fire	: Toxic fumes may be released. Nitrogen oxide. Carbon monoxide. Carbon dioxide. Hydrogen cyanide.
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### 5.3. Advice for firefighters

Firefighting instructions	: Cool down the containers exposed to heat with a water spray. Do not allow run-off from fire fighting to enter drains or water courses. Approach from upwind. Complete protective clothing. Do not allow run-off from fire fighting to enter drains or water courses. Eliminate all ignition sources if safe to do so.
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

#### 6.1.1. For non-emergency personnel

Emergency procedures	: Remove all sources of ignition. Ensure good ventilation of the work station. Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer). Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing dust/fume/gas/mist/vapours/spray. Access forbidden to unauthorised personnel.
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#### 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".
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### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

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

For containment	: Collect spillage.
Methods for cleaning up	: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect all waste in suitable and labelled containers and dispose according to local legislation. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.
Other information	: Dispose of materials or solid residues at an authorized site.

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### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment. Always wash hands after handling the product. Avoid inhalation of vapours. Contaminated work clothing should not be allowed out of the workplace. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Handle and open the container with care. Handle in accordance with good industrial hygiene and safety practice. Wash hands immediately after handling the product.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. 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

- Technical measures : Store in a well-ventilated place. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage. Keep only in the original container.
- Storage conditions : Store in a well-ventilated place. Keep away from food, drink and animal feeding stuffs.
- Incompatible materials : Strong oxidizing agent.
- Storage temperature : 5 – 25 °C

### 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)	
<b>Austria - Occupational Exposure Limits</b>	
MAK (OEL TWA)	0.05 mg/m <sup>3</sup> (Diphenylmethane-diisocyanate all isomers)
MAK (OEL TWA) [ppm]	0.005 ppm (Diphenylmethane-diisocyanate all isomers)
MAK (OEL STEL)	0.1 mg/m <sup>3</sup> (Diphenylmethane diisocyanate)
MAK (OEL STEL) [ppm]	0.01 ppm (Diphenylmethane diisocyanate)
OEL chemical category	Group B Carcinogen, Respiratory sensitizer, Skin sensitizer
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	0.052 mg/m <sup>3</sup>
OEL TWA [ppm]	0.005 ppm
<b>Czech Republic - Occupational Exposure Limits</b>	
PEL (OEL TWA)	0.05 mg/m <sup>3</sup>
OEL chemical category	Sensitizer
<b>Denmark - Occupational Exposure Limits</b>	
OEL TWA [1]	0.05 mg/m <sup>3</sup>
OEL TWA [2]	0.005 ppm

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<b>4,4'-Methylenediphenyl diisocyanate (101-68-8)</b>	
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA	0.05 mg/m <sup>3</sup>
OEL TWA [ppm]	0.005 ppm
OEL STEL	0.1 mg/m <sup>3</sup>
OEL STEL [ppm]	0.01 ppm
OEL chemical category	Sensitizer
<b>France - Occupational Exposure Limits</b>	
VME (OEL TWA)	0.1 mg/m <sup>3</sup>
VME (OEL TWA) [ppm]	0.01 ppm
VLE (OEL C/STEL)	0.2 mg/m <sup>3</sup>
VLE (OEL C/STEL) [ppm]	0.02 ppm
OEL chemical category	Carcinogen category 2, Respiratory sensitizer
<b>Germany - Occupational Exposure Limits (TRGS 900)</b>	
AGW (OEL TWA) [1]	0.05 mg/m <sup>3</sup> (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Chemical category	Skin notation, Skin sensitization, Respiratory system sensitization
<b>Hungary - Occupational Exposure Limits</b>	
AK (OEL TWA)	0.05 mg/m <sup>3</sup>
CK (OEL STEL)	0.05 mg/m <sup>3</sup>
OEL chemical category	Sensitizer
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [2]	0.005 ppm
OEL STEL [ppm]	0.015 ppm (calculated)
OEL chemical category	Sensitizer as -NCO
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (OEL TWA)	0.05 mg/m <sup>3</sup> (including pre-polymerized Isocyanates (adducts)-dust, aerosols (Methylene bisphenylisocyanate (MDI))
IPRV (OEL TWA) [ppm]	0.005 ppm (including pre-polymerized Isocyanates (adducts)-dust, aerosols (Methylene bisphenylisocyanate (MDI))
NRV (OEL C)	0.1 mg/m <sup>3</sup> (including pre-polymerized Isocyanates (adducts)-dust, aerosols (Methylene bisphenylisocyanate (MDI))
NRV (OEL C) [ppm]	0.01 ppm (including pre-polymerized Isocyanates (adducts)-dust, aerosols (Methylene bisphenylisocyanate (MDI))
OEL chemical category	Sensitizer
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	0.03 mg/m <sup>3</sup>
NDSch (OEL STEL)	0.09 mg/m <sup>3</sup>
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA [ppm]	0.005 ppm
<b>Romania - Occupational Exposure Limits</b>	
OEL STEL	0.15 mg/m <sup>3</sup>

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<b>4,4'-Methylenediphenyl diisocyanate (101-68-8)</b>	
OEL chemical category	C2
<b>Slovakia - Occupational Exposure Limits</b>	
NPHV (OEL TWA) [1]	0.002 mg/m <sup>3</sup> (Isocyanates) 0.03 mg/m <sup>3</sup> (Isopropylalcohol)
OEL chemical category	Sensitizer
<b>Slovenia - Occupational Exposure Limits</b>	
OEL TWA	0.05 mg/m <sup>3</sup> (inhalable fraction)
OEL TWA [ppm]	0.005 ppm
OEL STEL	0.05 mg/m <sup>3</sup> (inhalable fraction)
OEL STEL [ppm]	0.005 ppm
OEL chemical category	Category 2, Potential for cutaneous absorption
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA) [1]	0.052 mg/m <sup>3</sup>
VLA-ED (OEL TWA) [2]	0.005 ppm
OEL chemical category	Sensitizer
<b>Sweden - Occupational Exposure Limits</b>	
NGV (OEL TWA)	0.03 mg/m <sup>3</sup> (Diisocyanates)
NGV (OEL TWA) [ppm]	0.002 ppm (Diisocyanates)
KTV (OEL STEL)	0.05 mg/m <sup>3</sup> (Diisocyanates)
KTV (OEL STEL) [ppm]	0.005 ppm (Diisocyanates)
OEL chemical category	Sensitizer
<b>Norway - Occupational Exposure Limits</b>	
Grenseverdi (OEL TWA) [1]	0.05 mg/m <sup>3</sup>
Grenseverdi (OEL TWA) [2]	0.005 ppm
Korttidsverdi (OEL STEL) [ppm]	0.01 ppm (value from the regulation)
OEL chemical category	Allergenic substance
<b>Switzerland - Occupational Exposure Limits</b>	
KZGW (OEL STEL)	0.02 mg/m <sup>3</sup> (calculated as total NCO, B for Diphenylmethane-4,4'-diisocyanate (Isocyanate)
OEL chemical category	Skin notation
<b>Switzerland - BAT</b>	
BAT	10 µg/g creatinine Parameter: 4,4'-Diaminodiphenylmethane - Medium: urine - Sampling time: end of shift
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA [ppm]	0.005 ppm (Methylene bisphenyl isocyanate (MDI))
<b>Carbonic acid, calcium salt (1:1) (471-34-1)</b>	
<b>Croatia - Occupational Exposure Limits</b>	
GVI (OEL TWA) [1]	10 mg/m <sup>3</sup> (total dust, inhalable particles) 4 mg/m <sup>3</sup> (respirable dust)

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Carbonic acid, calcium salt (1:1) (471-34-1)	
<b>France - Occupational Exposure Limits</b>	
VME (OEL TWA)	10 mg/m <sup>3</sup>
<b>Latvia - Occupational Exposure Limits</b>	
OEL TWA	6 mg/m <sup>3</sup>
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	10 mg/m <sup>3</sup> (inhalable fraction)
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	10 mg/m <sup>3</sup> (particulate matter containing no Asbestos and <1% Crystalline silica)
<b>Switzerland - Occupational Exposure Limits</b>	
MAK (OEL TWA) [1]	3 mg/m <sup>3</sup> (respirable dust)
<b>Carbon black (1333-86-4)</b>	
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	3 mg/m <sup>3</sup>
<b>Croatia - Occupational Exposure Limits</b>	
GVI (OEL TWA) [1]	3.5 mg/m <sup>3</sup>
KGVI (OEL STEL)	7 mg/m <sup>3</sup>
<b>Czech Republic - Occupational Exposure Limits</b>	
PEL (OEL TWA)	2 mg/m <sup>3</sup> (dust)
<b>Denmark - Occupational Exposure Limits</b>	
OEL TWA [1]	3.5 mg/m <sup>3</sup>
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA	3 mg/m <sup>3</sup> (dust (Dusts))
<b>Finland - Occupational Exposure Limits</b>	
HTP (OEL TWA) [1]	3.5 mg/m <sup>3</sup>
HTP (OEL STEL)	7 mg/m <sup>3</sup>
<b>France - Occupational Exposure Limits</b>	
VME (OEL TWA)	3.5 mg/m <sup>3</sup>
<b>Greece - Occupational Exposure Limits</b>	
OEL TWA	3.5 mg/m <sup>3</sup>
OEL STEL	7 mg/m <sup>3</sup>
<b>Hungary - Occupational Exposure Limits</b>	
AK (OEL TWA)	3 mg/m <sup>3</sup> (respirable (flying and fibrous powders))
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [1]	3 mg/m <sup>3</sup> (inhalable fraction)
OEL STEL	15 mg/m <sup>3</sup> (calculated-inhalable fraction)
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	4 mg/m <sup>3</sup> (inhalable fraction)
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	3 mg/m <sup>3</sup>

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<b>Carbon black (1333-86-4)</b>	
OEL chemical category	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
<b>Slovakia - Occupational Exposure Limits</b>	
NPHV (OEL TWA) [1]	2 mg/m <sup>3</sup> (respirable fraction, 5% or less fibrogenic component) 10 mg/m <sup>3</sup> (respirable fraction, greater than 5% fibrogenic component) 10 mg/m <sup>3</sup> (total aerosol)
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA) [1]	3.5 mg/m <sup>3</sup>
<b>Sweden - Occupational Exposure Limits</b>	
NGV (OEL TWA)	3 mg/m <sup>3</sup> (inhalable fraction)
<b>United Kingdom - Occupational Exposure Limits</b>	
WEL TWA (OEL TWA) [1]	3.5 mg/m <sup>3</sup>
WEL STEL (OEL STEL)	7 mg/m <sup>3</sup>
<b>Norway - Occupational Exposure Limits</b>	
Grenseverdi (OEL TWA) [1]	3.5 mg/m <sup>3</sup>
Korttidsverdi (OEL STEL)	7 mg/m <sup>3</sup> (value calculated)
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA	3 mg/m <sup>3</sup> (inhalable particulate matter)
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
<b>Diisodecyl phthalate (26761-40-0)</b>	
<b>Austria - Occupational Exposure Limits</b>	
MAK (OEL TWA)	3 mg/m <sup>3</sup> (Phthalic acid ester)
MAK (OEL STEL)	5 mg/m <sup>3</sup> (Phthalic acid ester)
<b>Croatia - Occupational Exposure Limits</b>	
GVI (OEL TWA) [1]	5 mg/m <sup>3</sup>
<b>Denmark - Occupational Exposure Limits</b>	
OEL TWA [1]	3 mg/m <sup>3</sup>
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA	3 mg/m <sup>3</sup>
OEL STEL	5 mg/m <sup>3</sup>
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [1]	5 mg/m <sup>3</sup>
OEL STEL	15 mg/m <sup>3</sup> (calculated)
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (OEL TWA)	3 mg/m <sup>3</sup>
TPRV (OEL STEL)	5 mg/m <sup>3</sup>
<b>Sweden - Occupational Exposure Limits</b>	
NGV (OEL TWA)	3 mg/m <sup>3</sup> (same limit value expressed in mg/m <sup>3</sup> shall also be applied for those phthalates for which no limit values have been defined)
KTV (OEL STEL)	5 mg/m <sup>3</sup> (same limit value expressed in mg/m <sup>3</sup> shall also be applied for those phthalates for which no limit values have been defined)

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### Diisodecyl phthalate (26761-40-0)

#### United Kingdom - Occupational Exposure Limits

WEL TWA (OEL TWA) [1]	5 mg/m <sup>3</sup>
WEL STEL (OEL STEL)	15 mg/m <sup>3</sup> (calculated)

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 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.

#### 8.2.2. Personal protection equipment

##### 8.2.2.1. Eye and face protection

###### Eye protection:

Chemical goggles or safety glasses

##### 8.2.2.2. Skin protection

###### Skin and body protection:

Wear suitable protective clothing

###### Hand protection:

Chemically resistant protective gloves

##### 8.2.2.3. Respiratory protection

###### Respiratory protection:

Self-contained breathing apparatus

##### 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	: Black.
Appearance	: Liquid.
Odour	: Slight.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Explosive properties	: No data available.

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Oxidising properties	: No data available.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 100 °C (Closed cup, PMCC, ASTM D93)
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Viscosity, dynamic	: 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	: Not available
Relative density	: 1.23 ASTM D1475
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable.

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## 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

Avoid excessive heat for prolonged periods of time. Avoid high temperatures. Protect from moisture.

### 10.5. Incompatible materials

Reaction with water will produce heat. Avoid contact with: acids. Alcohols. Amines. Water. Ammonia. Alkalis. Metal compounds. Tide. Strong oxidising agent. Reaction with water will produce carbon dioxide.

### 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

#### 4,4'-Methylenediphenyl diisocyanate (101-68-8)

LD50 oral rat	31600 mg/kg
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<b>4,4'-Methylenediphenyl diisocyanate (101-68-8)</b>	
LC50 Inhalation - Rat	369 mg/m <sup>3</sup> (Exposure time: 4 h)
<b>Carbonic acid, calcium salt (1:1) (471-34-1)</b>	
LD50 oral rat	6450 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
LC50 Inhalation - Rat	> 3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation)), Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity)
LC50 Inhalation - Rat (Dust/Mist)	> 3 mg/l Source: ECHA
<b>Carbon black (1333-86-4)</b>	
LD50 oral rat	> 15400 mg/kg
LD50 dermal rabbit	> 8000 mg/kg Source: ECHA
LC50 Inhalation - Rat	> 4.6 mg/l/4h
<b>Diisodecyl phthalate (26761-40-0)</b>	
LD50 oral rat	64 g/kg
LD50 dermal rabbit	> 3160 mg/kg
LC50 Inhalation - Rat	> 12.54 mg/l/4h
Skin corrosion/irritation	: Not classified
<b>Carbonic acid, calcium salt (1:1) (471-34-1)</b>	
pH	8 - 9 (aqueous solution)
Serious eye damage/irritation	: Not classified
<b>Carbonic acid, calcium salt (1:1) (471-34-1)</b>	
pH	8 - 9 (aqueous solution)
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
<b>4,4'-Methylenediphenyl diisocyanate (101-68-8)</b>	
IARC group	3 - Not classifiable
<b>Carbon black (1333-86-4)</b>	
IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
<b>4,4'-Methylenediphenyl diisocyanate (101-68-8)</b>	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
<b>4,4'-Methylenediphenyl diisocyanate (101-68-8)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
<b>Carbonic acid, calcium salt (1:1) (471-34-1)</b>	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

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Carbonic acid, calcium salt (1:1) (471-34-1)	
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	≥ 0.212 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Carbon black (1333-86-4)	
LOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.0071 mg/l air Animal: rat, Animal sex: male
NOAEL (oral, rat, 90 days)	> 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.0011 mg/l air Animal: rat, Animal sex: male

Aspiration hazard : Not classified

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : 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 %

#### 11.2.2. Other information

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

Carbonic acid, calcium salt (1:1) (471-34-1)	
LC50 - Fish [1]	> 56000 mg/l Source: ECOTOX
EC50 72h - Algae [1]	> 14 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	22000 mg/l Source: Ecological Structure Activity Relationships

Carbon black (1333-86-4)	
LC50 - Fish [1]	> 1000 mg/l
EC50 72h - Algae [1]	> 10000 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	> 10000 mg/l Test organisms (species):
ErC50 algae	> 10000 mg/l Source: EHCA

Diisodecyl phthalate (26761-40-0)	
LC50 - Fish [1]	> 0.55 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 - Fish [2]	> 1 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	> 0.02 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 72h - Algae [1]	> 500 mg/l (Species: Desmodesmus subspicatus)
EC50 96h - Algae [1]	> 0.8 mg/l (Species: Pseudokirchneriella subcapitata [static])

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### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

4,4'-Methylenediphenyl diisocyanate (101-68-8)	
BCF - Fish [1]	(92 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	4.51 (at 22 °C (at pH 7))
Carbonic acid, calcium salt (1:1) (471-34-1)	
BCF - Fish [1]	(no bioaccumulation)
Diisodecyl phthalate (26761-40-0)	
BCF - Fish [1]	(14,4 dimensionless)

### 12.4. Mobility in soil

Carbonic acid, calcium salt (1:1) (471-34-1)	
Mobility in soil	4.971 Source: Quantitative Structure Activity Relation

### 12.5. Results of PBT and vPvB assessment

Polyurethane adhesive sealant	
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	

### 12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : 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 %.

### 12.7. Other adverse effects

Other adverse effects : No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

## 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

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ADR	IMDG	IATA	ADN	RID
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
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 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.

##### 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.

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### Drug Precursors Regulation (273/2004)

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

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

### Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	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
N.O.S.	Not Otherwise Specified

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### Abbreviations and acronyms:

vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Version	:	1.0
Issue date	:	10/20/2022
Revision date	:	10/20/2022
Data sources	:	Loli. ECHA reference.
Training advice	:	Normal use of this product shall imply use in accordance with the instructions on the packaging.
Other information	:	No information available.

### Full text of H- and EUH-statements:

	None
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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.
H373	May cause damage to organs through prolonged or repeated exposure.
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

Safety Data Sheet (SDS), EU

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.