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 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 01.11.2021 / 0010  
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 Valid from: 01.11.2021  
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 COSMO PU-205.280  
 COSMO PU-205.282  
 COSMO PU-205.284

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 (COSMOFEN DUO grau - Härter)

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

**COSMO PU-205.280**  
**COSMO PU-205.282**  
**COSMO PU-205.284**

**(COSMOFEN DUO - Härter)**  
**(COSMOFEN DUO grau - Härter)**

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

**Relevant identified uses of the substance or mixture:**

Adhesive

**Uses advised against:**

No information available at present.

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

Weiss Chemie + Technik GmbH & Co. KG  
 Hansastrasse 2  
 35708 Haiger  
 Tel: +49 (0) 2773 / 815-0  
 msds@weiss-chemie.de  
 www.weiss-chemie.de

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

**Emergency information services / official advisory body:**

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**Telephone number of the company in case of emergencies:**

+49 (0) 700 / 24 112 112 (WIC)  
 +1 872 5888271 (WIC)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) 1272/2008 (CLP)**

Hazard class	Hazard category	Hazard statement
STOT RE	2	H373-May cause damage to organs through prolonged or repeated exposure.
Eye Irrit.	2	H319-Causes serious eye irritation.
STOT SE	3	H335-May cause respiratory irritation.
Skin Irrit.	2	H315-Causes skin 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.

#### 2.2 Label elements

**Labeling according to Regulation (EC) 1272/2008 (CLP)**



Danger

H373-May cause damage to organs through prolonged or repeated exposure. H319-Causes serious eye irritation. H335-May cause respiratory irritation. H315-Causes skin 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.

P201-Obtain special instructions before use. P260-Do not breathe vapours or spray. P280-Wear protective gloves / protective clothing / eye protection / face protection. P284-Wear respiratory protection.

P302+P352-IF ON SKIN: Wash with plenty of water / soap. P304+P340-IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313-IF exposed or concerned: Get medical advice / attention.

EUH204-Contains isocyanates. May produce an allergic reaction.

As from 24 August 2023 adequate training is required before industrial or professional use. Diphenylmethane-diisocyanate, isomers and homologues

#### 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).  
 The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).  
 The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

n.a.

#### 3.2 Mixtures

Diphenylmethane-diisocyanate, isomers and homologues	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	---
CAS	9016-87-9
content %	25- $\leq$ 50
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, 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 and ATE	Skin Irrit. 2, H315: $\geq$ 5 % Eye Irrit. 2, H319: $\geq$ 5 % Resp. Sens. 1, H334: $\geq$ 0,1 % STOT SE 3, H335: $\geq$ 5 %

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter $\leq$ 10 $\mu$ m)	
Registration number (REACH)	01-2119489379-17-XXXX
Index	022-006-002
EINECS, ELINCS, NLP, REACH-IT List-No.	236-675-5
CAS	13463-67-7
content %	<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Carc. 2, H351 (as inhalation)

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.  
 The substances named in this section are given with their actual, appropriate classification!  
 For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

First-aiders should ensure they are protected!  
 Never pour anything into the mouth of an unconscious person!

##### Inhalation

Remove person from danger area.  
 Supply person with fresh air and consult doctor according to symptoms.  
 If the person is unconscious, place in a stable side position and consult a doctor.  
 Respiratory arrest - Artificial respiration apparatus necessary.

##### Skin contact

Wipe off residual product carefully with a soft, dry cloth.  
 Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.  
 Dab away with polyethylene glycol 400

##### Eye contact

Remove contact lenses.  
 Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

##### Ingestion

Rinse the mouth thoroughly with water.  
 Do not induce vomiting - give copious water to drink. Consult doctor immediately.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

The following may occur:

Dermatitis (skin inflammation)  
 Drying of the skin.  
 Allergic contact eczema  
 Discoloration of the skin  
 Irritant to mucosa of the nose and throat  
 Coughing  
 Headaches  
 Effect on the central nervous system  
 Asthmatic symptoms  
 In case of sensitivity, concentrations below the limit value may already result in asthmatic symptoms.  
 Respiratory distress

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

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

In case of irritation of the lungs, perform first-aid with controlled-dosage aerosol dexamethasone.

Pulmonary oedema prophylaxis

Medical supervision necessary due to possibility of delayed reaction.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media**

CO<sub>2</sub>  
 Extinction powder  
 Water jet spray  
 Foam

**Unsuitable extinguishing media**

High volume water jet

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

In case of fire the following can develop:

Oxides of carbon  
 Oxides of nitrogen  
 Isocyanates  
 Hydrocyanic acid (hydrogen cyanide)  
 Toxic gases  
 Danger of bursting (explosion) when heated

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### 5.3 Advice for firefighters

For personal protective equipment see Section 8.  
 In case of fire and/or explosion do not breathe fumes.  
 Protective respirator with independent air supply.  
 According to size of fire  
 Full protection, if necessary.  
 Cool container at risk with water.  
 Dispose of contaminated extinction water according to official regulations.

## SECTION 6: Accidental release measures

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

#### 6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.

Ensure sufficient ventilation, remove sources of ignition.

Avoid dust formation with solid or powder products.

Leave the danger zone if possible, use existing emergency plans if necessary.

Ensure sufficient supply of air.

Avoid inhalation, and contact with eyes or skin.

If applicable, caution - risk of slipping.

#### 6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

### 6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent surface and ground-water infiltration, as well as ground penetration.

Prevent from entering drainage system.

If accidental entry into drainage system occurs, inform responsible authorities.

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

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.

Allow to stand for a few days in an unclosed container until reaction no longer occurs.

Keep moist.

Do not close packing drum.

CO<sub>2</sub> formation in closed tanks causes pressure to rise.

### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

## SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

### 7.1 Precautions for safe handling

#### 7.1.1 General recommendations

Ensure good ventilation.

Avoid inhalation of the vapours.

If applicable, suction measures at the workstation or on the processing machine necessary.

Avoid contact with eyes or skin.

No contact with products of this type in case of allergies, asthma und chronic respiratory tract disorders.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

#### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

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

Keep out of access to unauthorised individuals.

Not to be stored in gangways or stair wells.

Store product closed and only in original packing.

Keep protected from direct sunlight and temperatures over 50°C.

Only store at temperatures from to .

Store in a dry place.

### 7.3 Specific end use(s)

Adhesive

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Chemical Name	Diphenylmethanediisocyanate, isomers and homologues	Content %:
WEL-TWA: 0,02 mg/m <sup>3</sup> (Isocyanates, all (as -NCO))	WEL-STEL: 0,07 mg/m <sup>3</sup> (Isocyanates, all (as -NCO))	<50
Monitoring procedures: ---		
BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine (At the end of the period of exposure)		
Other information: Sen (Isocyanates, all (as -NCO))		

Chemical Name	Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)	Content %:
WEL-TWA: 10 mg/m <sup>3</sup> (total inhalable dust), 4 mg/m <sup>3</sup> (respirable dust)	WEL-STEL: ---	<1
Monitoring procedures: ---		
BMGV: ---		
Other information: ---		

Chemical Name	Calcium carbonate	Content %:
WEL-TWA: 4 mg/m <sup>3</sup> (respirable dust), 10 mg/m <sup>3</sup> (total inhalable dust)	WEL-STEL: ---	---
Monitoring procedures: ---		
BMGV: ---		
Other information: ---		

Chemical Name	Silica, amorphous	Content %:
WEL-TWA: 6 mg/m <sup>3</sup> (total inh. dust), 2,4 mg/m <sup>3</sup> (resp. dust)	WEL-STEL: ---	---

Monitoring procedures: ---	Other information: ---
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Diphenylmethanediisocyanate, isomers and homologues						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	1	mg/l	
	Environment - marine		PNEC	0,1	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	10	mg/l	
	Environment - sewage treatment plant		PNEC	1	mg/l	
	Environment - soil		PNEC	1	mg/kg	
Consumer	Human - oral	Short term, local effects	DNEL	20	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL	0,05	mg/m <sup>3</sup>	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,05	mg/m <sup>3</sup>	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,025	mg/m <sup>3</sup>	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,025	mg/m <sup>3</sup>	
Consumer	Human - dermal	Short term, local effects	DNEL	17,2	mg/cm <sup>2</sup>	
Consumer	Human - dermal	Short term, systemic effects	DNEL	25	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	0,1	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	0,1	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m <sup>3</sup>	
Workers / employees	Human - dermal	Short term, local effects	DNEL	28,7	mg/cm <sup>2</sup>	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	50	mg/kg bw/d	

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,184	mg/l	
	Environment - marine		PNEC	0,0184	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,193	mg/l	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - sediment, freshwater		PNEC	100	mg/kg dw	
	Environment - sediment, marine		PNEC	100	mg/kg dw	
	Environment - soil		PNEC	100	mg/kg dw	
	Environment - oral (animal feed)		PNEC	1667	mg/kg feed	
Consumer	Human - oral	Long term, systemic effects	DNEL	700	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	10	mg/m <sup>3</sup>	

Calcium carbonate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - sewage treatment plant		PNEC	100	mg/l	
Consumer	Human - oral	Long term, systemic effects	DNEL	6,1	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	10	mg/m <sup>3</sup>	
Consumer	Human - inhalation	Long term, local effects	DNEL	1,06	mg/m <sup>3</sup>	
Consumer	Human - oral	Short term, systemic effects	DNEL	6,1	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	4,26	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	10	mg/m <sup>3</sup>	

Zeolites						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	3,2	mg/l	
	Environment - marine		PNEC	0,32	mg/l	
	Environment - sewage treatment plant		PNEC	95	mg/l	
	Environment - soil		PNEC	600	mg/kg dw	
Consumer	Human - oral	Long term, systemic effects	DNEL	1,25	mg/kg body weight/day	

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Consumer	Human - dermal	Long term, systemic effects	DNEL	1,25	mg/kg body weight/day
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	2,5	mg/kg body weight/day
Workers / employees	Human - inhalation	Long term, local effects	DNEL	3	mg/m3

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WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40, AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).  
 (8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE), (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE), (11) = Inhalable fraction (Directive 2004/37/CE), (12) = Inhalable fraction, Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).  
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU), (9) = Respirable fraction (2017/164/EU, 2017/2398/EU), (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40, BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.  
 \*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.  
 (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE),  
 (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

**8.2 Exposure controls**

**8.2.1 Appropriate engineering controls**

Ensure good ventilation. This can be achieved by local suction or general air extraction.  
 If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.  
 Applies only if maximum permissible exposure values are listed here.  
 Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.  
 These are specified by e.g. EN 14042.  
 EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

**8.2.2 Individual protection measures, such as personal protective equipment**

General hygiene measures for the handling of chemicals are applicable.  
 Wash hands before breaks and at end of work.  
 Keep away from food, drink and animal feedingstuffs.  
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:  
 Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:  
 Chemical resistant protective gloves (EN ISO 374).  
 Recommended  
 Protective nitrile gloves (EN ISO 374).  
 Minimum layer thickness in mm:  
 >= 0,35  
 Permeation time (penetration time) in minutes:  
 >= 480  
 The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.  
 The recommended maximum wearing time is 50% of breakthrough time.  
 Protective hand cream recommended.

Skin protection - Other:  
 Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:  
 Normally not necessary.  
 If OES or MEL is exceeded.  
 Filter A2 P2 (EN 14387), code colour brown, white  
 Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:  
 Not applicable

Additional information on hand protection - No tests have been performed.  
 In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.  
 Selection of materials derived from glove manufacturer's indications.  
 Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.  
 Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.  
 In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.  
 The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

**8.2.3 Environmental exposure controls**

No information available at present.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Physical state: Paste, liquid. (DIN ISO 2137)  
 Colour: According to specification  
 Odour: Characteristic  
 Melting point/freezing point: There is no information available on this parameter.  
 Boiling point or initial boiling point and boiling range: There is no information available on this parameter.  
 Flammability: There is no information available on this parameter.  
 Lower explosion limit: There is no information available on this parameter.  
 Upper explosion limit: There is no information available on this parameter.  
 Flash point: There is no information available on this parameter.

Auto-ignition temperature: There is no information available on this parameter.  
 Decomposition temperature: There is no information available on this parameter.  
 pH: Mixture reacts with water.  
 Kinematic viscosity: There is no information available on this parameter.  
 Solubility: Insoluble  
 Partition coefficient n-octanol/water (log value): Does not apply to mixtures.  
 Vapour pressure: There is no information available on this parameter.  
 Density and/or relative density: 1,60 g/cm3 (relative density)  
 Relative vapour density: There is no information available on this parameter.  
 Particle characteristics: Does not apply to liquids.

**9.2 Other information**

Explosives: Product is not explosive.  
 Oxidising liquids: There is no information available on this parameter.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

reacts with water

**10.2 Chemical stability**

Stable with proper storage and handling.

**10.3 Possibility of hazardous reactions**

Exothermic reaction possible with:  
 Alcohols  
 Amines  
 Bases  
 Acids  
 Water  
 Development of:  
 Carbon dioxide  
 CO2 formation in closed tanks causes pressure to rise.  
 Pressure increase will result in danger of bursting.

**10.4 Conditions to avoid**

See also section 7.  
 Protect from humidity.  
 Polymerisation due to high heat is possible.  
 T > ~ 260°C

**10.5 Incompatible materials**

See also section 7.  
 Acids  
 Bases  
 Amines  
 Alcohols  
 Water

**10.6 Hazardous decomposition products**

See also section 5.2  
 No decomposition when used as directed.

**SECTION 11: Toxicological information**

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

Possibly more information on health effects, see Section 2.1 (classification).

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Toxicity / effect	Endpoin t	Value	Unit	Organis m	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:	ATE	>20	mg/l/4h			Vapours, calculated value
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Diphenylmethanediisocyanate, isomers and homologues						
Toxicity / effect	Endpoin t	Value	Unit	Organis m	Test method	Notes
Acute toxicity, by oral route:	LD50	>10000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>9400	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	0,49	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol, Does not conform with EU classification.
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Yes (skin contact)
Respiratory or skin sensitisation:				Rat		Yes (inhalation)

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Germ cell mutagenicity:				Salmonella typhimurium	Regulation (EC) 440/2008 B.13/B.14 (REVERSE MUTATION TEST USING BACTERIA)	Analogous conclusion, Negative
Germ cell mutagenicity:				Rat	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative, Analogous conclusion
Carcinogenicity:		1	mg/m <sup>3</sup>	Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Positive
Reproductive toxicity (Developmental toxicity):		4	mg/m <sup>3</sup>	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Reproductive toxicity (Effects on fertility):				Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Reproductive toxicity:	NOAEL	12	mg/m <sup>3</sup>	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Aerosol
Specific target organ toxicity - single exposure (STOT-SE):						Irritation of the respiratory tract
Specific target organ toxicity - repeated exposure (STOT-RE):	NOEC	0,2	mg/kg		OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	
Aspiration hazard:						No
Symptoms:						fever, coughing, headaches, nausea and vomiting., dizziness, breathing difficulties, laryngeal oedema, abdominal pain, diarrhoea
Specific target organ toxicity - single exposure (STOT-SE), inhalative:						Target organ(s): respiratory organs, May cause respiratory irritation.

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 425 (Acute Oral Toxicity - Up-and-Down Procedure)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LD50	>6,8	mg/l/4h	Rat		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant, Mechanical irritation possible.
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitising
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium		Negative

Germ cell mutagenicity:						OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:						OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity (Developmental toxicity):				Rat		OECD 414 (Prenatal Developmental Toxicity Study)	No indications of such an effect.
Specific target organ toxicity - single exposure (STOT-SE):							Not irritant (respiratory tract).
Symptoms:							mucous membrane irritation, coughing, respiratory distress, drying of the skin.
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	3500	mg/kg/d	Rat			90d
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	10	mg/m <sup>3</sup>	Rat			90d

Calcium carbonate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 420 (Acute Oral Toxicity - Fixed Dose Procedure)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>3	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	No (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Carcinogenicity:						No indications of such an effect.
Reproductive toxicity:	NOEL	1000	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development. Tox. Screening Test)	
Specific target organ toxicity - single exposure (STOT-SE):						No indications of such an effect.
Specific target organ toxicity - repeated exposure (STOT-RE):						No indications of such an effect.
Aspiration hazard:						No
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	1000	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development. Tox. Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	0,212	mg/l	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	

Silica, amorphous						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method)	
Acute toxicity, by dermal route:	LD50	> 2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	





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12.5. Results of PBT and vPvB assessment						No PBT substance, No vPvB substance
Toxicity to bacteria:			>5000	mg/l	Escherichia coli	
Toxicity to bacteria:	LC0	24h	>10000	mg/l	Pseudomonas fluorescens	
Toxicity to annelids:	NOEC/N OEL		>1000	mg/kg	Eisenia foetida	
Water solubility:						Insoluble20 °C

**Calcium carbonate**

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h			Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	No observation with saturated solution of test material.
12.1. Toxicity to daphnia:	EC50	48h			Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	No observation with saturated solution of test material.
12.1. Toxicity to algae:	EC50	72h	>14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/N OEL	72h	14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Not relevant for inorganic substances.
12.3. Bioaccumulative potential:							Not to be expected
12.4. Mobility in soil:							n.a.
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Toxicity to bacteria:	NOEC/N OEL	3h	1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other organisms:	EC50	21d	>1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Glycine max
Other organisms:	EC50	21d	>1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Lycopersicon esculentum
Other organisms:	EC50	21d	>1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Avena sativa
Other organisms:	NOEC/N OEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Glycine max
Other organisms:	NOEC/N OEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Lycopersicon esculentum

Other organisms:	NOEC/N OEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Avena sativa
Other organisms:	EC50	14d	>1000	mg/kg dw	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other organisms:	NOEC/N OEL	14d	1000	mg/kg dw	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other organisms:	EC50	28d	>1000	mg/kg dw		OECD 216 (Soil Microorganism - Nitrogen Transformation Test)	
Other organisms:	NOEC/N OEL	28d	1000	mg/kg dw		OECD 216 (Soil Microorganism - Nitrogen Transformation Test)	
Water solubility:			0,0166	g/l		OECD 105 (Water Solubility)	20°C

Silica, amorphous							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	EC0	96h	>1000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC0	24h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	ErC50	72h	>=10000	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Inorganic products cannot be eliminated from water through biological purification methods.
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**For the substance / mixture / residual amounts**

EC disposal code no.:  
 The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)  
 08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances  
 08 05 01 waste isocyanates  
 Recommendation:  
 Sewage disposal shall be discouraged.  
 Pay attention to local and national official regulations.  
 E.g. suitable incineration plant.  
 Hardened product:  
 E.g. dispose at suitable refuse site.  
**For contaminated packing material**  
 Pay attention to local and national official regulations.  
 Empty container completely.  
 Uncontaminated packaging can be recycled.  
 Dispose of packaging that cannot be cleaned in the same manner as the substance.  
 15 01 10 packaging containing residues of or contaminated by hazardous substances

**SECTION 14: Transport information**

**General statements**

14.1. UN number or ID number: n.a.  
**Transport by road/by rail (ADR/RID)**  
 14.2. UN proper shipping name:  
 14.3. Transport hazard class(es): n.a.  
 14.4. Packing group: n.a.  
 Classification code: n.a.  
 LQ: n.a.  
 14.5. Environmental hazards: Not applicable  
 Tunnel restriction code:  
**Transport by sea (IMDG-code)**  
 14.2. UN proper shipping name:  
 14.3. Transport hazard class(es): n.a.  
 14.4. Packing group: n.a.  
 Marine Pollutant: n.a.  
 14.5. Environmental hazards: Not applicable  
**Transport by air (IATA)**  
 14.2. UN proper shipping name:  
 14.3. Transport hazard class(es): n.a.  
 14.4. Packing group: n.a.  
 14.5. Environmental hazards: Not applicable

**14.6. Special precautions for user**

Unless specified otherwise, general measures for safe transport must be followed.

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

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Non-dangerous material according to Transport Regulations.

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Observe restrictions:

Comply with national regulations/laws governing the protection of young people at work (national

implementation of the Directive 94/33/EC)!

Regulation (EC) No 1907/2006, Annex XVII

Diphenylmethanediisocyanate, isomeres and homologues

Comply with national regulations/laws governing maternity protection (national implementation of the Directive

92/85/EEC)!

Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC):

0,3 %

**15.2 Chemical safety assessment**

A chemical safety assessment is not provided for mixtures.

**SECTION 16: Other information**

Revised sections:

1-16

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

**Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):**

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
STOT RE 2, H373	Classification according to calculation procedure.
Eye Irrit. 2, H319	Classification according to calculation procedure.
STOT SE 3, H335	Classification according to calculation procedure.
Skin Irrit. 2, H315	Classification according to calculation procedure.
Resp. Sens. 1, H334	Classification according to calculation procedure.
Skin Sens. 1, H317	Classification according to calculation procedure.
Carc. 2, H351	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H351 Suspected of causing cancer by inhalation.

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.

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

STOT RE — Specific target organ toxicity - repeated exposure

Eye Irrit. — Eye irritation

STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation

Skin Irrit. — Skin irritation

Resp. Sens. — Respiratory sensitization

Skin Sens. — Skin sensitization

Carc. — Carcinogenicity

Acute Tox. — Acute toxicity - inhalation

**Key literature references and sources for data:**

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.

Guidelines for the preparation of safety data sheets as amended (ECHA).

Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).

Safety data sheets for the constituent substances.

ECHA Homepage - Information about chemicals.

GESTIS Substance Database (Germany).

German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).

EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU)

2017/164, (EU) 2019/1831, each as amended.

National Lists of Occupational Exposure Limits for each country as amended.

Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

**Any abbreviations and acronyms used in this document:**

acc., acc. to according, according to

ADR — Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX — Adsorbable organic halogen compounds

approx. — approximately

Art., Art. no. Article number

ASTM — ASTM International (American Society for Testing and Materials)

ATE — Acute Toxicity Estimate

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

BSEF The International Bromine Council

bw body weight

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification,

labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

DOC Dissolved organic carbon

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass

(algae, plants)

EC European Community

ECHA European Chemicals Agency

ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

ErCx, EPCx, ERLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate

(algae, plants)

etc. et cetera

EU European Union

EVAL Ethylene-vinyl alcohol copolymer

Fax. Fax number

gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

Koc Adsorption coefficient of organic carbon in the soil

Kow octanol-water partition coefficient

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC (Code) International Bulk Chemical (Code)

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLID International Uniform Chemical Information Database

IUPAC International Union for Pure Applied Chemistry

LC50 Lethal Concentration to 50 % of a test population

LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)

Log Koc Logarithm of adsorption coefficient of organic carbon in the soil

Log Kow, Log Pow Logarithm of octanol-water partition coefficient

LQ Limited Quantities

MARPOL International Convention for the Prevention of Marine Pollution from Ships

n.a. not applicable

n.av. not available

n.c. not checked

n.d.a. no data available

NIOSH National Institute for Occupational Safety and Health (USA)

NLP No-longer-Polymer

NOEC, NOEL No Observed Effect Concentration/Level

OECD Organisation for Economic Co-operation and Development

org. organic

OSHA Occupational Safety and Health Administration (USA)

PBT persistent, bioaccumulative and toxic

PE Polyethylene

PNEC Predicted No Effect Concentration

ppm parts per million

PVC Polyvinylchloride

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No

1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS

No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely

technical identifiers for processing a submission via REACH-IT.

RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (=

Regulation concerning the International Carriage of Dangerous Goods by Rail)

SVHC Substances of Very High Concern

Tel. Telephone

TOC Total organic carbon

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

wvt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they

are

not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

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