

Section 1: Identification of the mixture and of the company

Product identifier:

Product name: OBEX CORTEX 0364 2-Part Adhesive

Details of the Supplier of the Safety Data Sheet:

 Supplier: Obex Protection Ltd
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Section 2: Chemical composition

Substance/ Preparation: Adhesive

Chemical Family: Mixture

Information on hazardous ingredients:

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.

Label elements:
Labeling according to Regulation (EC) 1272/2008 (CLP):

Hazard pictograms



Warning

Signal word

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.
 Diphenylmethanediisocyanate, isomeres and homologues

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

Substances: n.a.

Mixtures:

Diphenylmethanediisocyanate, isomeres and homologues

Registration number (REACH)

Index

EINECS, ELINCS, NLP, REACH-IT List-No.

CAS

9016-87-9

content %

25-<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: >=5 %

Eye Irrit. 2, H319: >=5 %

Resp. Sens. 1, H334: >=0,1 %

STOT SE 3, H335: >=5 %

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)

Registration number (REACH)

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. The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

Section 4: First-aid measures

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.

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.

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**Extinguishing media:****Suitable extinguishing media:**

CO₂

Extinction powder

Water jet spray

Foam

Unsuitable extinguishing media:

High volume water jet

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

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 measure**Personal precautions:****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.

For emergency responders:

See section 8 for suitable protective equipment and material specifications.

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.

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.
CO₂ formation in closed tanks causes pressure to rise.

Reference to other sections:

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

Use working methods according to operating instructions.

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

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.

Specific end use(s):

Adhesive
Observe the instructions for good working practice and the recommendations for risk assessment.
Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).
Observe special requirements for isocyanates, also within the framework of the risk assessment and definition of protective measures.

Section 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.

Precautions for safe handling:**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.

Section 8: Exposure control and personal protection

Chemical Name	Diphenylmethanediisocyanate, isomeres and homologues		
WEL-TWA: 0,02 mg/m ³ (Isocyanates, all (as -NCO))	WEL-STEL: 0,07 mg/m ³ (Isocyanates, all (as -NCO))	---	

Monitoring procedures	---		
BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine (At the end of the period of exposure)		Other information: Other information: Sen (Isocyanates, all)	

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

Monitoring procedures	---		
BMGV: ---		Other information: ---	

Chemical Name	Calcium carbonate		
WEL-TWA: 4 mg/m ³ (respirable dust), 10 mg/m ³ (total inhalable dust)	WEL-STEL: ---	---	

Monitoring procedures	---		
BMGV: ---		Other information: ---	

Chemical Name	Silicon dioxide		
WEL-TWA: 6 mg/m ³ (total inh. dust), 2,4 mg/m ³ (resp. dust)	WEL-STEL: ---	---	

Monitoring procedures	---		
BMGV: ---		Other information: ---	

Diphenylmethanediisocyanate, isomeres 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 ³	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,05	mg/m ³	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,025	mg/m ³	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,025	mg/m ³	

Diphenylmethanediisocyanate, isomeres and homologues

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - dermal	Short term, local effects	DNEL	17,2	mg/cm ²	
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 ³	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	0,1	mg/m ³	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	mg/m ³	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m ³	
Workers / employees	Human - dermal	Short term, local effects	DNEL	28,7	mg/cm ²	
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 <= 10µm)

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	1000	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 ³	

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 ³	
Consumer	Human - inhalation	Long term, local effects	DNEL	1,06	mg/m ³	

Calcium carbonate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
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 ³	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	10	mg/m ³	

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	
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/m ³	

United Kingdom | WEL-TWA = Workplace Exposure Limit - Long-term exposure limit - 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)). (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:

(8) = Inhalable fraction (2004/37/CE, 2017/164/EU). (9) = Respirable fraction (2004/37/CE, 2017/164/EU). (11) = Inhalable fraction (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 (2004/37/CE).

WEL-STEL = Workplace Exposure Limit - Short-term exposure limit - 15-minute reference period

(EH40/2005 Workplace exposure limits (Fourth Edition 2020)).

(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:

(8) = Inhalable fraction (2004/37/EC, 2017/164/EU).

(9) = Respirable fraction (2004/37/EC, 2017/164/EU).

(10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU).

BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).

(EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL))

Other information (EH40/2005 Workplace exposure

limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:

(13) = The substance can cause sensitisation of the skin and of the respiratory tract (2004/37/CE),

(14) = The substance can cause sensitisation of the skin (2004/37/CE). |

Exposure controls:**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".

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: $\geq 0,35$

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.

Environmental exposure controls:

No information available at present.

Section 9: Physical and chemical properties

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.

Other information**Explosives**

Product is not explosive.

Oxidising liquids

There is no information available on this parameter.

Section 10: Stability and reactivity

Reactivity: reacts with water

Reactivity: reacts with water

Chemical stability: Stable with proper storage and handling.

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.

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

Hazardous decomposition products:

See also section 5.2

No decomposition when used as directed.

Section 11: Toxicological information

Information on hazard classes as defined in Regulation (EC) No 1272/2008:
 Possibly more information on health effects, see Section 2.1 (classification).

OBEX CORTEX 0364 2-Part Adhesive

Toxicity / effect	Endpoint	Value	Unit	Organism	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			n.d.a.
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, isomeres and homologues

Toxicity / effect	Endpoint	Value	Unit	Organism	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

Diphenylmethanediisocyanate, isomeres and homologues						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Respiratory or skin sensitisation				Guinea pig	OECD 406 (Skin Sensitisation)	Yes (skin contact)
Respiratory or skin sensitisation				Rat		Yes (inhalation)
Germ cell mutagenicity				Salmonella typhimurium	Regulation (EC)440/2008 B.13/B.14 (REVERSE MUTATION TEST USING BACTERIA)	Analogue conclusion, Negative
Germ cell mutagenicity				Rat	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative, Analogue conclusion
Carcinogenicity		1	mg/m ³	Rat	OECD 453 (Combined Chronic Toxicity/ Carcinogenicity Studies)	Positive
Reproductive toxicity (Developmental toxicity)			mg/m ³	Rat		Negative
Reproductive toxicity (Effects on fertility)				Rat		Negative
Reproductive toxicity	NOAEL	12	mg/m ³	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

Diphenylmethanediisocyanate, isomeres and homologues

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
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 <= 10µm)

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.

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10µm)						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
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	(Ames-Test)	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).
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 ³	Rat		(90d)
Symptoms						mucous membrane irritation, coughing, respiratory distress, drying of the skin.

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2-Part Adhesive (Component 2)

Safety Data Sheet

Version 01.01.01

Updated 05.12.24

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/Developm. 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

0364

2-Part Adhesive (Component 2)

Safety Data Sheet

Version 01.01.01

Updated 05.12.24

Calcium carbonate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
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/ Developm. 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)	

Silicon dioxide						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route	LD50	> 2000	mg/kg	Rat	OECD 402 (Acute Dermal 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
Germ cell mutagenicity					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Aspiration hazard						No

Information on other hazards

OBEX CORTEX 0364 2-Part Adhesive						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Endocrine disrupting properties						Does not apply to mixtures.
Other information						No other relevant information available on adverse effects on health.

Section 12: Ecological information

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

OBEX CORTEX 0364 2-Part Adhesive

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish							n.d.a.
Toxicity to daphnia							n.d.a.
Toxicity to algae							n.d.a.
Persistence and degradability							With water at the interface, transforms slowly with formation of CO ₂ into a firm, insoluble reaction product with a high melting point (polycarbamide). According to experience available to date, polycarbamide is inert and nondegradable.
Bioaccumulative potential							n.d.a.
Mobility in soil							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Endocrine disrupting properties							Does not apply to mixtures.

OBEX CORTEX 0364 2-Part Adhesive

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Other adverse effects							No information available on other adverse effects on the environment.
Other information							DOC-elimination degree (complexing organic substance) >= 80%/28d: No

Diphenylmethanediisocyanate, isomeres and homologues

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish	LC50	96h	>1000	mg/l	Brachydaniorerio	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to daphnia	NOEC/NOEL	21d	>=10	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
Toxicity to daphnia	EC50	24h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to algae	EC50	72h	>1640	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
Persistence and degradability		28d	0	%	activated sludge	OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	Not biodegradable
Bioaccumulative potential	BCF	42d	<14		Cyprinus caprio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	A notable biological accumulation potential is not to be expected (LogPow 1-3).

Diphenylmethanediisocyanate, isomeres and homologues							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria	EC50	3h	>100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other organisms	NOEC/NOEL	14d	>1000	mg/kg	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other information	BOD	28d	<10	%			
Other information							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10µm)							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish	LC50	96h	>100	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to daphnia	LC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to algae	EC50	72h	16	mg/l	Pseudokirchneriella subcapitata	U.S. EPA-600/9-78-018	
Persistence and degradability							Not relevant for inorganic substances

Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10µm)							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Bioaccumulative potential	BCF	42d	9,6				Not to be expected
Bioaccumulative potential	BCF	14d	19-352				Oncorhynchus mykiss
Mobility in soil							Negative
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/NOEL		>1000	mg/kg	Eisenia foetida		
Water solubility							Insoluble 20°C
Calcium carbonate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish	LC50	96h			Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	No observation with saturated solution of test material.
Toxicity to daphnia	EC50	48h			Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	No observation with saturated solution of test material.
Toxicity to algae	EC50	72h	>14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae			14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	

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2-Part Adhesive (Component 2)**
Safety Data Sheet

Version 01.01.01

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Calcium carbonate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Persistence and degradability							Not relevant for inorganic substances.
Bioaccumulative potential							Not to be expected
Mobility in soil							n.a.
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/NOEL	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)	Lyco-persicon esculentum
Other organisms	EC50	21d	>1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Avena sativa
Other organisms	NOEC/NOEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Glycine max
Other organisms	NOEC/NOEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Lyco-persicon esculentum
Other organisms	NOEC/NOEL	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)	

Calcium carbonate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Other organisms	NOEC/ NOEL	14d	1000	mg/kg dw	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other organisms	EC50	28d	>1000	mg/kg dw		OECD 216 (Soil Micro- organisms - Nitrogen Transformation Test)	
Other organisms	NOEC/ NOEL	28d	1000	mg/kg dw		OECD 216 (Soil Micro- organisms - Nitrogen Transformation Test)	
Water solubility			0,0166	g/l		OECD 105 (Water Solubility)	20°C

Silicon dioxide							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Persistence and degradability							Inorganic products cannot be elimin- ated from water through biological purifi- cation methods.
Results of PBT and vPvB assessment							No PBT sub- stance, No vPvB sub- stance

Section 13: Disposal considerations

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.
 Untampered 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

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, isomers 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 %
 National requirements/regulations on safety and health protection must be applied when using work equipment.

Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

Section 14: Transport information

General statements:
Transport by road/by rail (ADR/RID)

UN number or ID number: Not Applicable
 UN proper shipping name: Not Applicable
 Transport hazard class(es): Not Applicable
 Packing group: Not Applicable
 Environmental hazards: Not Applicable
 Tunnel restriction code: Not Applicable
 Classification code: Not Applicable
 LQ: Not Applicable
 Transport category: Not Applicable

Transport by sea (IMDG-code)

UN number or ID number: Not Applicable
 UN proper shipping name: Not Applicable
 Transport hazard class(es): Not Applicable
 Packing group: Not Applicable
 Environmental hazards: Not Applicable
 Marine Pollutant: Not Applicable
 EmS: Not Applicable

Transport by air (IATA)

UN number or ID number: Not Applicable
 UN proper shipping name: Not Applicable
 Transport hazard class(es): Not Applicable
 Packing group: Not Applicable
 Environmental hazards: Not Applicable

Special precautions for user

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

Maritime transport in bulk according to IMO instruments

Non-dangerous material according to Transport Regulations.

Section 16: Other information

Revised sections: 2

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.

Section 15: Regulatory information

Safety, health and environmental regulations/

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
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.

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

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

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

mg/kg bw

mg/kg body weight

mg/kg bw/d, mg/kg bw/day

mg/kg body weight/day

mg/kg dw

mg/kg dry weight

mg/kg wwt

mg/kg wet weight

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.

6/7/8/9xx-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

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.