Wisacoll® K1+ altweiss

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

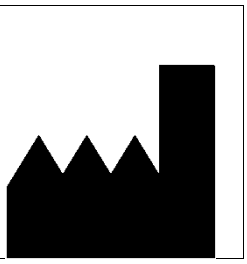
Trade Name	**Wisacoll K1+ altweiss**
Item number	PUK1.22 (Colour: antique white)
BAG-Register number (CH)	CPID: 854296-47 UFI: 4V40-6014-A002-S96M

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

Relevant identified uses	Adhesive
Uses advised against	All applications that are not explained in this technical data sheet.
Field for application [SU]	SU22 – Commercial use: Public domain (administration, education, entertainment, services, trade)

1.3 Details of the supplier of the safety data sheet

Supplier	**Wisabax AG** Kleb- und Dichtstoffe
Address	Grossmatte 21 / Postfach CH-6014 Luzern-Littau
Phone	+41 (0)41 250 18 18
Email	info@wisabax.ch
URL	www.wisabax.ch
Information contact	Technical Dept. - Mr B. Wicki Environment Dept. - Mrs E. Svets



1.4 Emergency telephone number

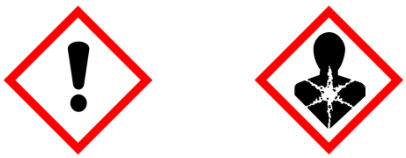
24h emergency number (just possible in switzerland)	**Tel. 145**	
Tox Info Suisse (ancient swiss toxicological infomations centre) **For emergencies from all the countries** 24h accessible in german, french, italian oder english. For not urgent cases see www.toxinfo.ch.	**Tel. +41 (0)44 251 51 51**	

2. Hazards identification

2.1 Classification of the substance or mixture according to (EC) Nr. 1272/2008 (CLP).

Hazard class	Hazard category	Hazard warnings
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 May probably cause cancer.
STOT RE	2	H373 May cause damage to organs through prolonged or repeated exposure through inhalation (airways).

2.2 Labelling according to Regulation (EC) Nr. 1272/2008 (CLP)

Pictograms(e)	
Signal word(s)	**Danger**
Hazard warning(s) [H-statements]	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 May probably cause cancer. H373 May cause damage to organs through prolonged or repeated exposure through inhalation (airways).
Safety instruction(s) [P-statements]	P201 Obtain special instructions before use. P260 Do not breathe vapour / aerosol. P280 Wear protective gloves / protective clothing / eye protection / face protection. P284 [In case of inadequate ventilation] wear respiratory protection. P302 + P352 IF ON SKIN: Wash with plenty of water /… 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.
Special marking(s) [EUH-Phrases]	EUH204 Contains isocyanates. May produce an allergic reaction. In the EU applies: As from 24 August 2023 adequate training is required before industrial or professional use. EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
Contains	4,4′-methylene diphenyl diisocyanate 2,2′-methylenediphenyl diisocyanate o-(p-isocyanatobenzyl)phenyl isocyanate diphenylmethane diisocyanates, isomers and homologues

2.3 Other hazards

Persons suffering from allergic reactions to this product should avoid contact with de product.

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.
The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

3. Composition/information on ingredients

3.1 Substances
This product is a mixture, for more see section 3.2.

3.2 Description of the mixture
Mixture of the following dangerous substances in quantities to be declared/relevant.

Content: 1 % - < 10 %

CAS No.: 108-32-7 EG No.: 203-572-1 Index No.: 607-194-00-1 Reg. No. (REACH): 01-2119537232-48-XXXX	**propylene carbonate**	Eye Irrit. 2, H319 Substance with an occupational exposure limit (see section 8)

Content: 1 % - < 10 %

CAS No.: 101-68-8 EG No.: 202-966-0 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119457014-47-XXXX	**4,4′-methylene diphenyl diisocyanate** Further name(s): diphenylmethane-4,4'-diisocyanate SCL Skin Irrit. 2, H315: >=5% SCL Eye Irrit. 2, H319: >=5% SCL Resp. Sens. 1, H334: >=0.1% SCL STOT SE 3, H335: >=5%	Carc. 2, H351; Acute Tox. 4, H332; STOT RE 2, H373; Eye Irrit. 2, H319; STOT SE 3, 335; Skin Irrit. 2, H315; Resp. Sens. 1, H334; Skin Sens. 1, H317

Content: 1 % - < 10 %

CAS No.: 5873-54-1 EG No.: 227-534-9 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119480143-45-XXXX	**o-(p-isocyanatobenzyl)phenyl isocyanate** SCL Skin Irrit. 2, H315: >=5% SCL Eye Irrit. 2, H319: >=5% SCL Resp. Sens. 1, H334: >=0.1% SCL STOT SE 3, H335: >=5%	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

Content: 1 % - < 10 %

CAS No.: 9016-87-9 EG No.: 618-498-9 Index No.: - Reg. No. (REACH): 01-2119457024-46-XXXX	**diphenylmethane diisocyanates, isomers and homologues** Further name(s): diphenylmethane diisocyanates, (polymer) SCL Skin Irrit. 2, H315: C>=5% SCL Eye Irrit. 2, H319: C>=5% SCL Resp. Sens. 1, H334: C>=0.1% SCL STOT SE 3, H335: C>=5%	Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335

Content: < 5 %

CAS No.: 13463-67-7 EG No.: 236-675-5 Index No.: 022-006-002 Reg. No. (REACH): 01-2119489379-17-XXXX	**titanium dioxide** (homogeneously mixed in pasty or liquid, NOT inhalable form)	Substance with certain legal requirements. [Carc. 2, H351] (inhalative)

Content: 0.1 % - < 1 %

CAS No.: 2536-05-2 EG No.: 219-799-4 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119927323-43-XXXX	**2,2′-methylenediphenyl diisocyanate** SCL Skin Irrit. 2, H315: >=5% SCL Eye Irrit. 2, H319: >=5% SCL Resp. Sens. 1, H334: >=0.1% SCL STOT SE 3, H335: >=5%	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

Note: H-phrases and abbreviations are detailed in section 16.

4. First aid measures

4.1 Description of first aid measures

General information	Observe the general rules of first aid measures. Refresh occasionally your knowledge. If medical advice is required, have this safety data sheet, the packaging or the label ready.
Following inhalation	Remove affected person from the danger area. Supply fresh air. Loosen restrictive clothing. Place in a resting position. Consult a doctor depending on the symptoms. If not breathing provide immediately artificial respiration and obtain medical treatment. In case of unconsciousness bring person in recovery position and take medical advice.
Following skin contact	Product residues remove mechanically, e.g. Remove contaminated clothing immediately. Wash skin with much water and soap. Consult a doctor depending ond the symptoms, if possible, show this container or label. If there is one, dab affected body areas with polyethylene glycol 400 (or similar non-hazardous polyol).
Following eye contact	Remove contact lenses, if possible. Rinse thoroughly with water and consult a doctor. Present this safety data sheet or product label.
Following ingestion	Rinse mouth thoroughly with water. Keep airways free. Telephone the emergency number or consult a doctor. If it is possible, present this safety data sheet or product label. Do not induce vomiting! Drink plenty of water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed
It may, in particular trough prolonged or repeated exposure the following symptoms may occur.
Dermatitis (inflammation), desiccation of the skin, allergic contact eczema, skin discolouration, Irritation in the nasal and pharyngeal mucous membranes, cough, Headaches, effects on the central nervous system, asthmatic symptoms, shortness of breath.
In certain cases, symptoms of intoxication may only appear after a longer period of time/after several hours.

4.3 Indication of any immediate medical attention and special treatment needed
Symptomatic treatment
In pulmonary irritation treat initially with dexamethasone metered-dose aerosol. Pulmonary edema prophylaxis.
Medical examinations required because delayed entering effective possible.

5. Firefighting measures

5.1 Extinguishing media
Always adapt firefighting measures to the surroundings and the size of the fire.

Suitable extinguishing media: Water spray jet, Dry powder fire extinguishers, Alcohol-resistant foam, Carbon dioxide
Unsuitable extinguishing media: Full water jet

5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire:
Carbon oxide (Carbon monoxide, ..), Nitrogen oxide (NOx), Isocyanat, Hydrocyanic acid (Hydrogen cyanide).
Risk of bursting when heated.

5.3 Advice for fire-fighters
Do not inhale combustion gases.
Wear breathing apparatus with own air supply. Wear full protection depending on fire class.
Use water spray to cool endangered containers.
Dispose contaminated fire extinguishing water according to official directives.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Arrange for sufficient air supply. Avoid eye and skin contact as well as inhalation. Keep away unnecessary people from the scene of an accident; ideally contrary to the wind direction. Wear protective clothing (see Section 8).

6.2 Environmental precautions
Avoid further leakage or release, if it's possible without risk. Do not empty into drains. Dam up larger quantities. Prevent surface and ground-water infiltration, as well as ground penetration.

6.3 Methods and material for containment and cleaning up
Absorb bigger quantities with fluid-binding material (e.g. universal binder, sand, diatomaceous earth, sawdust) and dispose of according to section 13.
Let stand for several days until no further reaction in an unsealed container. Keep moist. Do not close the container. CO2 formation in closed containers can print arise.

6.4 Reference to other sections
Personal protective equipment see section 8. Waste disposal see section 13.

7. Handling and storage

7.1 Precautions for safe handling
Ensure good ventilation. Avoid inhaling the vapors. If necessary suction measures at the workplace or on the processing machines required. With allergies, asthma and chronic respiratory diseases, no contact with products of this kind. Open and handle receptacle with care. Avoid eye and skin contact. Eating, drinking, smoking, as well as food-storage, is prohibited in workspace. Notes note on the packaging and current technical data sheet. Use working methods according to operating instructions. Avoid release into the environment. Put on appropriate protective equipment (see section 8). Wash contaminated clothing before reuse. General hygiene measures for the handling of chemicals are applicable. Wash hands before breaks and after work. Take off contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities
To avoid the unauthorized and children and kept in a safe place. Do not store warnings in corridors and stairwells. Store only in original container and keep locked up. Store this material from incompatible materials. Keep away from food, drink and animal feedingstuffs. Protect them from direct sunlight and heat. Store in a dry place. Recommended storage temperature: +15°C - +25°C.

7.3 Specific end uses
See section 1.2. - See technical data sheet and the product imprint.

8. Exposure controls/personal protection

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

Isocyanate limit values General limit values for diisocyanates, polymeric isocyanate and reaction masses with isocyanates	CH: MAC: 0.005 ppm (0.02 mg/m^3) (measured as total NCO) CH: STEL: 0.005 ppm (0.02 mg/m^3) (measured as total NCO) CH: 10 µg/g (5 nmol/mmol) Kreatinin (4,4'-Diaminodiphenylmethan, U, b) DE: TWA: 0.05 mg/m^3 (up to 31.12.2028) (calculated as MDI) EU: TWA: 10 µg/m^3 (up to 31.12.2028) (measured as NCO, diisocyanates) (EU) EU: TWA: 6 µg/m^3 (from the 01.01.2029) (measured as NCO, diisocyanates) (EU) Peak Limitation – Exceedance Factor: 1,=2=(I) (calculated as MDI) BLV: 10 µg/g Kreatinin (4,4'-Diaminodiphenylmethan, U, b), (4,4'-MDI) Other information: DFG, H, Y (calculated as MDI) (AGW) / (diisocyanates) (EU) AT: MAC-TWA / TRC-TWA: 0.005 ppm (0.05 mg/m^3) (4,4'-MDI) AT: MAC-TWA: 10 µg/m^3 (up to 31.12.2028) (measured as NCO, diisocyanates) (EU) AT: MAC-TWA: 6 µg/m^3 (from the 01.01.2029) (measured as NCO, diisocyanates) (EU) AT: MAC-STV / TRC-ST: 0.01 ppm (0.1 mg/m^3) [8 x 5min. (Mow)] (4,4'-MDI) The specific measurement methods must be agreed with the provider carrying out the measurements.

CAS No.: 101-68-8 EG No.: 202-966-0 Index No.: 615-005-00-9	**4,4′-methylene diphenyl diisocyanate** CH: MAC: 0.005 ppm (0.02 mg/m^3) DE: TWA: 0.05 mg/m^3 E

Reg. No. (REACH): 01-2119457014-47-XXXX	Mehr Informationen siehe **Isocyanat-Grenzwerte** unter Abschnitt 8.1

CAS No.: 5873-54-1 EG No.: 227-534-9 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119480143-45-XXXX	**o-(p-isocyanatobenzyl)phenyl isocyanate** CH: MAC: 0.005 ppm (0.02 mg/m^3) CH: STEL: 0.005 ppm (0.02 mg/m^3) DE: TWA: 0.05 mg/m^3 Mehr Informationen siehe **Isocyanat-Grenzwerte** unter Abschnitt 8.1

CAS No.: 9016-87-9 EG No.: 618-498-9 Index No.: - Reg. No. (REACH): 01-2119457024-46-XXXX	**diphenylmethane diisocyanates, isomers and homologues** CH: MAC: 0.02 mg/m^3 CH: STEL: 0.02 mg/m^3 DE: TWA: 0.05 E mg/m^3 (calculated as MDI) Mehr Informationen siehe **Isocyanat-Grenzwerte** unter Abschnitt 8.1

CAS No.: 2536-05-2 EG No.: 219-799-4 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119927323-43-XXXX	**2,2′-methylenediphenyl diisocyanate** CH: MAC: 0.005 ppm (0.02 mg/m^3) DE: TWA: 0.05 mg/m^3 (0.02 mg/m^3) Mehr Informationen siehe **Isocyanat-Grenzwerte** unter Abschnitt 8.1

CAS No.: 108-32-7 EG No.: 203-572-1 Index No.: 607-194-00-1 Reg. No. (REACH): 01-2119537232-48-XXXX	**propylene carbonate** CH: MAC: 6 ppm (25.5 mg/m^3) DE: TWA: 2 ppm (8.5 mg/m^3)

CAS No.: 7631-86-9 EG No.: 231-545-4 Index No.: - Reg. No. (REACH): 01-2119379499-16-XXXX	**silicon dioxide** CH: MAC: 4 mg/m^3 (e) DE: TWA: 4 mg/m^3 E

CAS No.: 471-34-1 EG No.: 207-439-9 Index No.: - Reg. No. (REACH): -	**calcium carbonate** CH: MAC: 3 mg/m^3 (a) BE: TWA: 10 mg/m^3 (a)

CAS No.: 13463-67-7 EG No.: 236-675-5 Index No.: 022-006-002 Reg. No. (REACH): 01-2119489379-17-XXXX	**titanium dioxide** (in powder form with min. 1% particles with aerodynamic diameter <= 10 µm) CH: MAC: 3 mg/m^3 (a) DE: TRHS / TWA: 1.25 mg/m^3 Exp. Factor 2, AGW: 10 mg/m^3, Exp. Factor 2 [25/Q5,1,S,1/4,2,5]

MAK = Maximum Workplace Concentration (TLV = Threshold Limit Value)
CH It's a swiss limit, edited by SUVA. If there is no limit from SUVA it's a work place limit (AGW) from Germany or another European state.

CAS No.: 108-32-7 EG No.: 203-572-1 Index No.: 607-194-00-1 Reg. No. (REACH): 01-2119537232-48-XXXX	**propylene carbonate** employee: DNEL: 20 mg/kg [dermal exposure route, long-term, systemic effects]; employee: DNEL: 20 mg/m^3 [inhalative, long-term, local effects]; employee: DNEL: 70.53 mg/kg [inhalative, long-term, systemic effects]; employee: DNEL: 176 mg/m^3 [inhalative, long-term, systemic effects]; consumer: DNEL: 10 mg/kg [dermal exposure route, long-term, systemic effects]; consumer: DNEL: 10 mg/m^3 [inhalative, long-term, local effects]; consumer: DNEL: 10 mg/kg [oral, long-term, systemic effects];

	consumer: DNEL: 17.4 mg/m³ [inhalative, long-term, systemic effects]; environment: PNEC: 9 mg/l [freshwater (intermittent release)]; environment: PNEC: 0.09 mg/l [sea water]; environment: PNEC: 0.9 mg/l [fresh water]; environment: PNEC: 0.083 mg/l [sediment, seawater]; environment: PNEC: 0,83 mg/l [sediment, fresh water]; environment: PNEC: 0.81 mg/l [soil]; environment: PNEC: 7400 mg/l [microorganisms in wastewater treatment plants] [24/Q2/4]

CAS No.: 101-68-8 EG No.: 202-966-0 Index No.: 615-005-00-9 Reg. No. (REACH): -	**4,4′-methylene diphenyl diisocyanate** employee: DNEL: 50 mg/kg bw/d [dermal exposure route, short-term, systemic effects]; employee: DNEL: 0.1 mg/m³ [inhalative, short-term, systemic effects]; employee: DNEL: 28.7 mg/cm² [dermal exposure route, long-term, systemic effects]; employee: DNEL: 0.1 mg/m³ [inhalative, short-term, local effects]; employee: DNEL: 0.05 mg/m³ [inhalative, long-term, local effects]; employee: DNEL: 0.05 mg/m³ [inhalative, long-term, systemic effects]; consumer: DNEL: 25 mg/kg bw/d [dermal exposure route, short-term, systemic effects]; consumer: DNEL: 0.05 mg/m³ [inhalative, short-term, systemic effects]; consumer: DNEL: 20 mg/kg bw/d [oral, short-term, systemic effects]; consumer: DNEL: 17.2 mg/cm² [dermal exposure route, long-term, systemic effects]; consumer: DNEL: 0.05 mg/m³ [inhalative, short-term, local effects]; consumer: DNEL: 0.025 mg/m³ [inhalative, long-term, systemic effects]; consumer: DNEL: 0.025 mg/m³ [inhalative, long-term, local effects]; environment: PNEC: 11.7 µg/l [fresh water]; environment: PNEC: 1.17 mg/l [sea water]; environment: PNEC: 570.4 mg/kg [sediment, fresh water]; environment: PNEC: 57.04 mg/kg [sediment, seawater]; environment: PNEC: 2.33 mg/kg dw [soil]; environment: PNEC: 1 mg/l [microorganisms in wastewater treatment plants]; environment: PNEC: 37 mg/l [water, sporadic (intermittent) release] [24/Q2/4]

CAS No.: 9016-87-9 EG No.: 618-498-9 Index No.: - Reg. No. (REACH): 01-2119457024-46-XXXX	**diphenylmethane diisocyanates, isomers and homologues** consumer: DNEL: 20 mg/kg [oral, short-term, local effects]; consumer: DNEL: 0.05 mg/m³ [inhalative, short-term, local effects]; consumer: DNEL: 0.05 mg/m³ [inhalative, short-term, systemic effects]; consumer: DNEL: 0.025 mg/m³ [inhalative, long-term, local effects]; consumer: DNEL: 0.025 mg/m³ [inhalative, long-term, systemic effects]; consumer: DNEL: 17.2 mg/cm² [dermal exposure route, long-term, systemic effects]; consumer: DNEL: 25 mg/kg [dermal exposure route, short-term, systemic effects]; employee: DNEL: 0.1 mg/m³ [inhalative, short-term, local effects]; employee: DNEL: 0.1 mg/m³ [inhalative, short-term, systemic effects]; employee: DNEL: 0.05 mg/m³ [inhalative, long-term, local effects]; employee: DNEL: 0.05 mg/m³ [inhalative, long-term, systemic effects]; employee: DNEL: 28.7 mg/cm² [dermal exposure route, long-term, systemic effects]; employee: DNEL: 50 mg/kg [dermal exposure route, short-term, systemic effects]; environment: PNEC: 1 mg/l [sediment, fresh water]; environment: PNEC: 0.1 mg/l [sediment, seawater]; environment: PNEC: 10 mg/l [water, sporadic release]; environment: PNEC: 1 mg/l [microorganisms in wastewater treatment plants]; environment: PNEC: 1 mg/kg [soil]

CAS No.: 13463-67-7 EG No.: 236-675-5 Index No.: - Reg. No. (REACH): 01-2119489379-17-XXXX	**titanium dioxide** employee: DNEL: 10 mg/m³ [inhalative, long-term, local effects]; consumer: DNEL: 700 mg/kg [oral, long-term, systemic effects]; environment: PNEC: 0.184 mg/l [fresh water]; environment: PNEC: 0.0184 mg/l [sea water];

	environment: PNEC: 0.193 mg/l [fresh water, sporadic release]; environment: PNEC: 100 mg/l [microorganisms in wastewater treatment plants]; environment: PNEC: 1000 mg/kg dw [sediment, fresh water]; environment: PNEC: 100 mg/kg dw [sediment, seawater]; environment: PNEC: 100 mg/kg dw [soil]; environment: PNEC: 1667 mg/kg feed [oral, feed] [24/Q1/4]

CAS No.: 2536-05-2 EG No.: 219-799-4 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119927323-43-XXXX	**2,2′-methylenediphenyl diisocyanate** employee: DNEL: 50 mg/kg bw/day [dermal exposure route, short-term, systemic effects]; employee: DNEL: 0.1 mg/m³ [inhalative, short-term, systemic effects]; employee: DNEL: 28.7 mg/cm² [dermal exposure route, long-term, systemic effects]; employee: DNEL: 0.1 mg/m³ [inhalative, short-term, local effects]; employee: DNEL: 0.05 mg/m³ [inhalative, long-term, systemic effects]; employee: DNEL: 0.05 mg/m³ [inhalative, long-term, local effects]; consumer: DNEL: 25 mg/kg [dermal exposure route, short-term, systemic effects]; consumer: DNEL: 0.05 mg/kg [inhalative, long-term, systemic effects]; consumer: DNEL: 20 mg/kg [oral, short-term, systemic effects]; consumer: DNEL: 17.2 mg/cm² [dermal exposure route, long-term, systemic effects]; consumer: DNEL: 0.05 mg/m³ [inhalative, short-term, local effects]; consumer: DNEL: 0.025 mg/m³ [inhalative, long-term, systemic effects]; consumer: DNEL: 0.025 mg/m³ [inhalative, long-term, local effects]; environment: PNEC: 1 mg/l [fresh water]; environment: PNEC: 0.1 mg/l [sea water]; environment: PNEC: 1 mg/kg [soil]; environment: PNEC: 1 mg/l [microorganisms in wastewater treatment plants]

CAS No.: 7631-86-9 EG No.: 231-545-4 Index No.: - Reg. No. (REACH): 01-2119379499-16-XXXX	**silicon dioxide** employee: DNEL: 4 mg/m³ [inhalative, long-term, local effects]

CAS No.: 471-34-1 EG No.: 207-439-9 Index No.: - Reg. No. (REACH): 01-2119486795-18-XXXX	**calcium carbonate** employee: DNEL: 10 mg/m³ [inhalative, long-term, systemic effects]; employee: DNEL: 4.26 mg/m³ [inhalative, long-term, local effects]; consumer: DNEL: 10 mg/m³ [inhalative, long-term, systemic effects]; consumer: DNEL: 1.06 mg/m³ [inhalative, long-term, local effects]; consumer: DNEL: 6.1 mg/kg bw/d [oral, short-term, systemic effects]; consumer: DNEL: 6.1 mg/kg bw/d [oral, long-term, systemic effects]; environment: PNEC: 100 mg/l [microorganisms in wastewater treatment plants] [24/Q2/4]

CAS No.: 5873-54-1 EG No.: 227-534-9 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119480143-45-XXXX	**o-(p-isocyanatobenzyl)phenyl isocyanate** employee: DNEL: 50 mg/kg bw/day [dermal exposure route, short-term, systemic effects]; employee: DNEL: 0.1 mg/m³ [inhalative, short-term, systemic effects]; employee: DNEL: 28.7 mg/m² [dermal exposure route, long-term, systemic effects]; employee: DNEL: 0.1 mg/m³ [inhalative, short-term, local effects]; employee: DNEL: 0.05 mg/m³ [inhalative, long-term, systemic effects]; employee: DNEL: 0.05 mg/m³ [inhalative, long-term, local effects]; consumer: DNEL: 0.025 mg/m³ [inhalative, long-term, local effects]; consumer: DNEL: 25 mg/kg [dermal exposure route, short-term, systemic effects]; consumer: DNEL: 0.05 mg/m³ [inhalative, short-term, systemic effects]; consumer: DNEL: 0.05 mg/m³ [inhalative, short-term, local effects]; consumer: DNEL: 20 mg/kg [oral, short-term, systemic effects]; consumer: DNEL: 17.2 mg/cm² [dermal exposure route, long-term, systemic effects]; consumer: DNEL: 0.05 mg/m³ [dermal exposure route, long-term, systemic effects];

	consumer: DNEL: 0.025 mg/m³ [inhalative, long-term, systemic effects]; environment: PNEC: 1 mg/l [fresh water]; environment: PNEC: 0.1 mg/l [sea water]; environment: PNEC: 1 mg/kg [soil]; environment: PNEC: 1 mg/l [microorganisms in wastewater treatment plants] [25/Q2/4]

8.2 Exposure controls

8.2.1 Appropriate engineering controls
Ensure good ventilation, e.g. by local suction, general exhaust air.
Minimize the risk of inhalations of vapours.
If possible, work with completely self-contained equipment.
Comply with the workplace exposure limits.
If limits can't be adhered to, use appropriate respiratory protection.

8.2.2 Personal protective equipment

General data	Select personal protective equipment according to the CEN standards; discuss protective equipment with the supplier.
Eye/face protection	Safety glasses with side protection shield (EN 166).
Hand-/Body protection	Use chemical-resistant protective gloves according to EN 374.
Protective clothing	Wear suitable protective clothing, e.g long-sleeved clothes and safety shoes according to EN ISO 20345.
Respiratory protection	Normally not needed. If limits can't be met. Use self-contained breathing apparatus. Filter A2 P2 according to EN 14387 (Colour code brown, white). Follow the wear time limits for breathing apparatus.
Hygiene measures	General hygiene measures for the handling of chemicals are applicable. Do not eat, drink or smoke while at work. Wash hands before breaks and after work.
Thermal hazards	Not applicable.



On the basis of the contents and our experience the following non-binding recommendations for the selection of the material of the protective gloves (minimum layer thickness: 0.4 mm):

Recommended glove material:	Nitrile rubber/Nitrile latex (NBR)
Inappropriate glove material:	Textile Materials

The selection of suitable depends upon the material, and also upon the quality of the gloves. The degree of protection will vary from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the materials used for gloves cannot be predetermined; it is therefore necessary to check this before using the product.
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

8.2.3 Environmental exposure controls
More information that is detailed is not available yet.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Pasty-Liquid
Colour	white
Density	~1.52 g/cm3
Viscosity	Not determined
Odour	Characteristic
Odour threshold	Not determined

pH-level	Not determined
Melting point/freezing point	Not determined
Initial boiling point/boiling range	Not determined
Decomposition temperature	Not determined
Rate of evaporation	Not determined
Flashpoint	Not determined
Auto-ignition temperature	Not determined
Lower explosive limits	Not determined
Upper explosive limits	Not determined
Vapour pressure	Not determined
Vapour density (Air = 1)	Not determined
Explosive properties	The product is not explosive.
Oxidising properties	No

9.2 Other information

Solubility in / Miscibility with water.	Immiscible with water
Solubility in / Miscibility in	Not determined
Partition coefficient n-Octanol/Water	Not determined
Conductivity	Not determined
VOC-content (EU)	0 %
VOC-content (CH)	0 %

10. Stability and reactivity

10.1 Reactivity
This product reacts with wate runder formation of foam.

10.2 Chemical stability
The product is stable when properly stored and handled.

10.3 Possibility of hazardous reactions
Exothermic reaction possible with in section 10.5 called incompatible materials.
CO_2

10.4 Conditions to avoid
Protect from humidity. Protect container from direct sun.
Polymerization possible at high temperatures.

10.5 Incompatible materials
Acids, Bases, Alcohols, Amines, Water.

10.6 Hazardous decomposition products
No decomposition if used according to specifications.
In case of fire or very high heat can i.a. the following hazardous decomposition products are formed:
Carbon oxide (Carbon monoxide, ..), Nitrogen oxide (NOx), Isocyanat, Hydrocyanic acid (Hydrogen cyanide).

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity (inhalativ)	ATE >20 mg/l/4h

11.2. Toxicological information of hazardous ingredients

CAS No.: 108-32-7 EG No.: 203-572-1 Index No.: 607-194-00-1 Reg. No. (REACH): 01-2119537232-48-XXXX	**propylene carbonate** acute toxicity: LD50: >5000 mg/kg [oral, rat, OECD 401]; acute toxicity: LD50: >2000 mg/kg [dermal exposure route, rabbit, OECD 402]; corrosive/irritant effect on the skin: non-irritant [rabbit, OECD 404]; serious eye damage/irritation: irritant [rabbit, OECD 405]; respiratory/skin sensitization: not sensitising [human]; germ cell mutagenicity: negative [OECD 471]; germ cell mutagenicity: negative [OECD 474]; germ cell mutagenicity: negative [OECD 482]

	carcinogenicity: negative [mouse, OECD 451]; reproductive toxicity: NOAEL: 1000 mg/kg, negative [rat, OECD 414]; reproductive toxicity: NOAEL: 5000 mg/kg [rat, OECD 414]; aspiration hazard: no; specific target organ toxicity - repeated exposure (STOT RE): NOEL: >5000 mg/kg [OECD 408]; specific target organ toxicity - repeated exposure (STOT RE): NOEC: 100 mg/m^3 [OECD 413, dust/fog]; symptoms: breathing difficulties, headaches, gastrointestinal complaints, dizziness, nausea [24/Q2/2]

CAS No.: 101-68-8 EG No.: 202-966-0 Index No.: 615-005-00-9 Reg. No. (REACH): -	**4,4′-methylene diphenyl diisocyanate** acute toxicity: LD50: >2000 mg/kg [oral, rat, analogy reasoning]; acute toxicity: LD50: >9400 mg/kg [dermal exposure route, rabbit, OECD 402, analogy reasoning]; acute toxicity: LC50: 0.368 mg/l/4h [inhalative, rat, OECD 403, aerosol, the EU classification may vary depending on the source or the variant of the substance]; acute toxicity: LC50: 1.5 mg/l/4h [inhalative, aerosol]; acute toxicity: ATE: 1.5 mg/l/4h [inhalative, dust/fog]; acute toxicity: ATE: 11 mg/l/4h [inhalative, vapours]; corrosive/irritant effect on the skin: irritant [rabbit, OECD 404, Skin. Irrit. 2, analogy reasoning]; respiratory/skin sensitization: sensitising (inhalation) [Guinea pig]; respiratory/skin sensitization: sensitising (skin contact) [mouse, OECD 429, Skin. Sens. 1]; germ cell mutagenicity: negative [Salmonella typhimurium, OECD 471 (Bacterial Reverse Mutation Test), analogy reasoning]; germ cell mutagenicity: negative [rat, OECD 474 (Mammalian Erythrocyte Micronucleus Test)]; germ cell mutagenicity: negative [rat, OECD 489 (In Vivo Mammalian Alkaline Comet Assay)]; carcinogenicity: [rat, OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies), aerosol, analogy reasoning, Carc. 2]; reproductive toxicity: NOAEL, 4-12 mg/m^3 [rat, OECD 414 (Prenatal Developmental Toxicity Study), aerosol, analogy reasoning]; specific target organ toxicity - single exposure (STOT SE): may irritate the respiratory tract [inhalative]; specific target organ toxicity - repeated exposure (STOT RE): LOAEL, 1 mg/m^3 [rat, OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies), inhalative, analogy reasoning]; symptoms: shortness of breath, cough, mucous membrane irritation [24/Q2/2]

CAS No.: 5873-54-1 EG No.: 227-534-9 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119480143-45-XXXX	**o-(p-isocyanatobenzyl)phenyl isocyanate** acute toxicity: LD50: >2000 mg/kg [oral, rat, analogy reasoning]; acute toxicity: LD50: >9400 mg/kg [dermal exposure route, rabbit, OECD 402, analogy reasoning]; acute toxicity: LD50: 0.387 mg/l/4h [inhalative, rat, aerosol, OECD 402, the EU classification may vary depending on the source or the variant of the substance]; acute toxicity: ATE: 1.5 mg/l/4h [inhalative, rat, aerosol]; acute toxicity: ATE: 11 mg/l/4h [inhalative, rat, vapours]; corrosive/irritant effect on the skin: irritant [rabbit, OECD 404, Skin Irrit 2, analogy reasoning]; serious eye damage/irritation: non-irritant [rabbit, OECD 405, analogy reasoning, the EU classification may vary depending on the source or the variant of the substance]; respiratory/skin sensitization: no (skin contact) [Guinea pig, OECD 406, analogy reasoning]; respiratory/skin sensitization: Ja (inhalation) [Guinea pig, OECD 406, analogy reasoning]; respiratory/skin sensitization: Ja (skin contact) [mouse, OECD 429, analogy reasoning]; germ cell mutagenicity: negative [salmonella typhimurium, OECD 471, analogy reasoning]; germ cell mutagenicity: negative [rat, OECD 474, analogy reasoning]; carcinogenicity: [rat, OECD 453, aerosol, analogy reasoning, Carc. 2];

	reproductive toxicity: NOAEL: 4 - 12 mg/m³ [rat, OECD 414, aerosol, analogy reasoning]; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 0.2 mg/m³ [OECD 453, rat, aerosol, analogy reasoning, target organ(s): respiratory system]; specific target organ toxicity - repeated exposure (STOT RE): LOAEL: 1 mg/m³ [OECD 453, rat, aerosol, analogy reasoning, target organ(s): respiratory system]; symptoms: asthmatic complaints, mucous membrane irritation, cough, breathing difficulties [25/Q2/4]

CAS No.: 9016-87-9 EG No.: 618-498-9 Index No.: - Reg. No. (REACH): 01-2119457024-46-XXXX	**diphenylmethane diisocyanates, isomers and homologues** acute toxicity: LD50: >5000 mg/kg [oral, rat, OECD 401]; acute toxicity: LD50: >5000 mg/kg [dermal exposure route, rabbit, OECD 402]; acute toxicity: LD50: 0.31-0.49 mg/l/4h [inhalative, rat, OECD 403, aerosol, the EU classification may vary depending on the source or the variant of the substance]; acute toxicity: ATE: 11 mg/l/4h [inhalative, vapours]; acute toxicity: ATE: 1.5 mg/l/4h [inhalative, dust/fog]; corrosive/irritant effect on the skin: slightly irritant [rabbit, OECD 404, Skin Irrit. 2]; serious eye damage/irritation: Ja [rabbit, OECD 405, Eye Irrit. 2]; respiratory/skin sensitization: Ja (skin contact) [mouse, OECD 429, analogy reasoning]; respiratory/skin sensitization: slightly irritant (skin contact) [Guinea pig, OECD 406]; respiratory/skin sensitization: Ja (inhalation) [rat, OECD 406]; germ cell mutagenicity: negative [rat, OECD 474 (Mammalian Erythrocyte Micronucleus Test, analogy reasoning]; germ cell mutagenicity: negative [Salmonella typhimurium, OECD 471]; reproductive toxicity: NOAEL: 4 mg/m³, negative [rat, OECD 414, aerosol]; carcinogenicity: suspected carcinogenic effect [rat, OECD 453, aerosol]; specific target organ toxicity - single exposure (STOT SE): [inhalative, target organ(s): respiratory system, may irritate the respiratory tract]; specific target organ toxicity - repeated exposure (STOT RE): [inhalative, target organ(s): respiratory system]; specific target organ toxicity - repeated exposure (STOT RE): LOAEL: 1 mg/m³ [inhalative, rat, OECD 453, aerosol, analogy reasoning]; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 0.2 mg/m³ [inhalative, rat, OECD 453, aerosol, analogy reasoning]; symptoms: breathing difficulties [25/Q2/4]

CAS No.: 13463-67-7 EG No.: 236-675-5 Index No.: - Reg. No. (REACH): 01-2119489379-17-XXXX	**titanium dioxide** acute toxicity: LD50: >10000 mg/kg [oral, rat, OECD 425]; acute toxicity: LD50: >5000 mg/kg [dermal exposure route, rabbit]; acute toxicity: LC50: >5.09 mg/l/4h [inhalative, rat]; corrosive/irritant effect on the skin: non-irritant [dermal exposure route, rabbit, OECD 404]; serious eye damage/irritation: non-irritant, mechanical irritation possible [rabbit, OECD 405]; respiratory/skin sensitization: not sensitising [Guinea pig, OECD 406]; germ cell mutagenicity: negative [mouse, OECD 474 (Mammalian Erythrocyte Micronucleus Test)]; germ cell mutagenicity: negative [mammals, OECD 473 (In Vitro Mammalian Erythrocyte Chromosome Aberration Test)]; germ cell mutagenicity: negative [salmonella typhimurium, (Ames test)]; germ cell mutagenicity: negative [OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)]; germ cell mutagenicity: negative] [OECD 471 (Bacterial Reverse Mutation Test)]; carcinogenicity: EU: Carc. 2 (inhalation), H351, only applies in powder form with min. 1% particles with aerodynamic diameter <= 10 µm; not valid in case of homogeneously mixed in pasty or liquid, NOT inhalable form); persistence and degradability: poorly biodegradable; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 3500 mg/kg/90d [rat]; specific target organ toxicity - repeated exposure (STOT RE): NOAEC: 10 mg/m³/90d [rat];

	symptoms: mucous membrane irritation, cough, shortness of breath, drying of the skin [24/Q1,2/4]

CAS No.: 2536-05-2 EG No.: 219-799-4 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119927323-43- XXXX	**2,2′-methylenediphenyl diisocyanate** acute toxicity: LD50: >2000 mg/kg [oral, rat, regulation 440/2008 B.1, analogy reasoning]; acute toxicity: LD50: >9400 mg/kg [dermal exposure route, rabbit, OECD 402]; acute toxicity: LC50: 0.527 mg/l/4h [inhalative, rat, OECD 403]; acute toxicity: ATE: 1.5 mg/l [inhalative, aerosol]; acute toxicity: ATE: 11 mg/l/4h [inhalative, vapours]; corrosive/irritant effect on the skin: irritant [rabbit, OECD 404, Skin Irrit 2]; serious eye damage/irritation: slightly irritant [rabbit, OECD 405]; respiratory/skin sensitization: sensitising [mouse, OECD 429]; respiratory/skin sensitization: Ja (inhalation) [Guinea pig, analogy reasoning]; respiratory/skin sensitization: Ja (skin contact) [mouse, OECD 429, analogy reasoning]; germ cell mutagenicity: negative [salmonella typhimurium, OECD 471, analogy reasoning]; germ cell mutagenicity: negative [rat, OECD 474, analogy reasoning]; carcinogenicity: [rat, OECD 453, suspected carcinogenic effect, analogy reasoning]; reproductive toxicity: NOAEL: 4 - 12 mg/m^3 [rat, OECD 414, keine Hinweise auf eine derartige Wirkung, analogy reasoning]; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 0.2 mg/m^3, aerosol, target organ(s): may irritate the respiratory tract, analogy reasoning; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 1 mg/m^3 symptoms: shortness of breath, cough, mucous membrane irritation

CAS No.: 471-34-1 EG No.: 207-439-9 Index No.: - Reg. No. (REACH): -	**calcium carbonate** acute toxicity: LD50: >2000 mg/kg [oral, rat, OECD 420]; acute toxicity: LD50: >2000 mg/kg [dermal exposure route, rat, OECD 402]; acute toxicity: LC50: >3 mg/l/4h [inhalative, rat, OECD 403]; corrosive/irritant effect on the skin: non-irritant [rabbit, OECD 404]; serious eye damage/irritation: non-irritant [rabbit, OECD 405]; respiratory/skin sensitization: no (skin contact) [mouse, OECD 429]; germ cell mutagenicity: negative [OECD 471, Bacterial Reverse Mutation Test]; germ cell mutagenicity: negative [OECD 473, In Vitro Mammalian Chromosome Aberration Test]; germ cell mutagenicity: negative [OECD 476, In Vitro Mammalian Cell Gene Mutation Test]; carcinogenicity: keine Hinweise auf eine derartige Wirkung; reproductive toxicity: NOEL: 1000 mg/kg bw/d [rat, OECD 422]; specific target organ toxicity - single exposure (STOT SE): keine Hinweise auf eine derartige Wirkung; specific target organ toxicity - repeated exposure (STOT RE): keine Hinweise auf eine derartige Wirkung; specific target organ toxicity - repeated exposure (STOT RE): NOAEL: 1000 mg/kg bw/d [oral, rat, OECD 422, Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test] ; specific target organ toxicity - repeated exposure (STOT RE): NOAEC: 0.212 mg/l [inhalative, rat, OECD 413, Subchronic Inhalation Toxicity - 90-Day Study]; aspiration hazard: no; symptoms: blood in urine (haematuria), nausea and vomiting; other information: harmless, is authorised as an additive in foodstuffs (E170) [25/Q2/4,5]

CAS No.: 7631-86-9 EG No.: 231-545-4 Index No.: - Reg. No. (REACH): 01-2119379499-16-XXXX	**silicon dioxide** acute toxicity: LD50: >5000 mg/kg [oral, rat, OECD 423]; acute toxicity: LD50: >2000 mg/kg [dermal exposure route, rat, OECD 402]; acute toxicity: LC50: >0.139 mg/l/4h [inhalative, rat]; corrosive/irritant effect on the skin: non-irritant [rabbit, OECD 404]; serious eye damage/irritation: non-irritant [rabbit, OECD 405]; respiratory/skin sensitization: not sensitising [Guinea pig]; germ cell mutagenicity: negative [OECD 471];

	aspiration hazard: no; symptoms: by eye contact: Irritation and redness may occur. [25/Q2/2,4]

12. Ecological information

12.1 Toxicity

Aquatic toxicity Germany (Self-classification)	WGK 1 Slightly hazardous to water
The product is not classified as dangerous for the environment.	

12.2 Persistence and degradability
No information is available.

12.3 Bioaccumulative potential
No information is available.

12.4 Mobility in soil
No information is available.

12.5 Results of PBT and vPvB assessment
See section 2.3.

12.6 Other adverse effects
Do not allow product to reach ground water, water course or sewag system.

12.7 Additional ecotoxicological information

CAS No.: 108-32-7 EG No.: 203-572-1 Index No.: 607-194-00-1 Reg. No. (REACH): 01-2119537232-48-XXXX	**propylene carbonate** acute toxicity, fish: LC50: >1000 mg/l/96h [Cyprinus caprio, 92/69/EC]; acute toxicity, daphnia: EC50: >1000 mg/l/48h [Daphnia magna, OECD 202]; acute toxicity, algae: EC50: >900 mg/l/72h [Desmodesmus subspicatus, OECD 201]; chronic toxicity, algae: NOEC: 900 mg/l; persistence and degradability: 83.5-87.7 %/29d [OECD 301 B, easily biodegradable]; persistence and degradability: DOC 90%-100%/, easily biodegradable [OECD 301]; bioaccumulative potential: Log Pow: -0,41, is not to be expected; results of PBT and vPvB assessment: no PBT substance, no vPvB substance; acute bacteriotoxicity: EC10: 7400 mg/l/16h [Pseudomonas putida, DIN 38412 T. 8]; other information: AOX: 0% [25/Q2/2,4]

CAS No.:101-68-8 EG No.: 202-966-0 Index No.: 615-005-00-9 Reg. No. (REACH): -	**4,4′-methylene diphenyl diisocyanate** acute toxicity, fish: LC50: >1000 mg/l/96h [Brachydanio rerio, OECD 203]; acute toxicity, daphnia: EC50: >1000 mg/l/24h [Daphnia magna, analogy reasoning]; acute toxicity, algae: NOEC/NOEL: 1640 mg/l/72h [Desmodesmus subspicatus, OECD 201, analogy reasoning]; acute toxicity, algae: EC50: 1.5 mg/l/72h [OECD 201]; persistence and degradability: 0%/28d, [OECD 302 C, slowly reacts with water at the boundary surface to form a solid, high-melting insoluble reaction product with the formation of CO_2. polyurea is inert and non-degradable according to experience to date; bioaccumulative potential: Log Pow: 5.22, is to be expected; bioaccumulative potential: BCF: 200/28d acute bacteriotoxicity: EC50: >100 mg/l/3h [activated sludge, OECD 209, analogy reasoning]; acute toxicity, other organisms: NOEC/NOEL, >1000 mg/kg/14d [Lactuca sativa, OECD 208, analogy reasoning]; acute toxicity, other organisms: NOEC/NOEL, EC50: >1000 mg/kg/14d [Avena sativa, OECD 208, analogy reasoning]; annelid worm toxicity: EC50: >1000 mg/kg/14d [Eisenia foetida, OECD 207]; annelid worm toxicity: NOEC/NOEL: >1000 mg/kg/14d [Lumbricus terrestris, OECD 207, analogy reasoning];

	mobility in soil: H (Henry): 0.0229 Pa*m^3/mol [Cyprinus Caprio, is not to be expected]; results of PBT and vPvB assessment: no PBT substance; no vPvB substance; other information: does not contain organically bound . [24/Q2/2]

CAS No.: 5873-54-1 EG No.: 227-534-9 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119480143-45-XXXX	**o-(p-isocyanatobenzyl)phenyl isocyanate** acute toxicity, fish: LC50: >1000 mg/l/96h [Brachydanio rerio, OECD 203, analogy reasoning]; acute toxicity, daphnia: EC50: > 1000 mg/l/24h [Daphnia magna, OECD 202, analogy reasoning]; acute toxicity, daphnia: NOEC/NOEL: >10 mg/l/21d [Daphnia magna, OECD 202, analogy reasoning]; acute toxicity, algae: ErC50: >1640 mg/l/72h [Scenedesmus subspicatus, OECD 201, analogy reasoning]; persistence and degradability: 0%/28d, non-biodegradable [OECD 302, slowly reacts with water at the boundary surface to form a solid, high-melting insoluble reaction product with the formation of CO_2]; bioaccumulative potential: BCF: 200/28d [Cyprinus caprio, OECD 305, is not to be expected, analogy reasoning]; mobility in soil: H (Henry): 0.029 Pa*m^3/mol; results of PBT and vPvB assessment: no PBT substance, no vPvB substance; acute bacteriotoxicity: EC50: >100 mg/l/3h [activated sludge, OECD 209, analogy reasoning]; other organisms: NOEC/NOEL: >1000 mg/kg/14d [Avena sativa, OECD 208, analogy reasoning]; other organisms: NOEC/NOEL: >1000 mg/kg/14d [Lactuca sativa, OECD 208, analogy reasoning]; annelid worm toxicity: NOEC/NOEL: >1000 mg/kg/14d [Eisenia foetida, OECD 207, analogy reasoning] [25/Q2/4]

CAS No.: 9016-87-9 EG No.: 618-498-9 Index No.: - Reg. No. (REACH): 01-2119457024-46-XXXX	**diphenylmethane diisocyanates, isomers and homologues** acute toxicity, fish: LC50: >1000 mg/l/96h [Brachydanio rerio, OECD203]; acute toxicity, daphnia: NOEC/NOEL: >10 mg/l/21d [OECD 202, Daphnia magna]; acute toxicity, crustaceans: EC50: >1000 mg/l/24h [OECD 202, Daphnia magna]; acute toxicity, algae: ErC50: >1640 mg/l/72h [Scenedesmus subspicatus, OECD 201]; persistence and degradability: 0%/28 d [OECD 302 C (Inherent Biodegradability – Modified MITI Test (II)), non-biodegradable]; bioaccumulative potential: BCF: <14/42d, is not to be expected [Cyprinus carpio, OECD 305 (Bioconcentration - Flow-Through Fish Test)]; water solubility: insoluble 15 °C; results of PBT and vPvB assessment: no PBT substance, no vPvB substance; acute bacteriotoxicity: EC50: >100 mg/l/3h [activated sludge, OECD 209]; other organisms: NOECL/NOEL: >1000 mg/kg/14d [Lactuca sativa, OECD 208] ; annelid worm toxicity: NOECL/NOEL: >1000 mg/kg [Lumbricus terrestris, OECD 207] [25/Q2,1/1]

CAS No.: 13463-67-7 EG No.: 236-675-5 Index No.: - Reg. No. (REACH): 01-2119489379-17-XXXX	**titanium dioxide** acute toxicity, fish: LC50: >100 mg/l/96h [Oncorhnchus mykiss, OECD 203]; acute toxicity, daphnia: LC50: >100 mg/l/48h [Daphnia magna, OECD 202]; acute toxicity, crustaceans: LC50: 19.3 mg/l/48h [Daphnia magna]; acute toxicity, algae: EC50: 16 mg/l/72h [Pseudokirchneriella subcapitata, U.S. EPA600/9-78-018]; acute toxicity, algae: NOEC: ≥2.92 mg/l/21d [chronic]; acute toxicity, algae: NOEC: 5600 mg/l/72h [chronic]; persistence and degradability: poorly biodegradable; bioaccumulative potential: BCF: 9.6/42d, is not to be expected; bioaccumulative potential: BCF: 19-352/14d [Oncorhynchus mykiss]; mobility in soil: negative; results of PBT and vPvB assessment: no PBT substance, no vPvB substance; acute bacteriotoxicity: >5000 mg/l [Escherichia coli]; acute bacteriotoxicity: LC0: >10000 mg/l/24h [Pseudomonas fluorescens];

	acute bacteriotoxicity: >5000 mg/l [Pseudomonas flueroscens] annelid worm toxicity: NOEC/NOEL: >1000 mg/kg [Eisenia foetida]; water solubility: insoluble 20°C [24/Q1,2,106/4,3]

CAS No.: 2536-05-2 EG No.: 219-799-4 Index No.: 615-005-00-9 Reg. No. (REACH): 01-2119927323-43-XXXX	**2,2′-methylenediphenyl diisocyanate** acute toxicity, fish: LC50: >1000 mg/l/96h [Brachydanio rerio, OECD 203, analogy reasoning]; acute toxicity, daphnia: EC50: >1000 mg/l/24h [Daphnia magna, analogy reasoning]; acute toxicity, daphnia: NOEC/NOEL: >10 mg/l/21d [Daphnia magna, OECD 201, analogy reasoning]; acute toxicity, algae: EC50: >1640 mg/l/72h [Scenedesmus subspicatus, OECD 201, analogy reasoning]; persistence and degradability: 0%/28d [OECD 302 C], slowly reacts with water at the boundary surface to form a solid, high-melting insoluble reaction product with the formation of CO_2. polyurea is inert and non-degradable according to experience to date; bioaccumulative potential: Log Pow: 5.22 , is to be expected; bioaccumulative potential: BCF: 200/28d is not to be expected, [Cyprinus caprio, OECD 305, analogy reasoning]; acute bacteriotoxicity: EC50: >100 mg/l/3h [activated sludge, OECD 209, analogy reasoning]; other organisms: NOEC/NOEL: >1000 mg/kg [Avena sativa, OECD 208] ; other organisms: NOEC/NOEL: >1000 mg/kg [Lactuca sativa, OECD 208, analogy reasoning]; annelid worm toxicity: NOEC/NOEL: >1000 mg/kg/14d [Eisenia foetida, OECD 207, analogy reasoning]; mobility in soil: H (Henry): 0.029 Pa*m^3/mol; results of PBT and vPvB assessment: no PBT substance, no vPvB substance [24/Q2/1]

CAS No.: 7631-86-9 EG No.: 231-545-4 Index No.: - Reg. No. (REACH): 01-2119379499-16-XXXX	**silicon dioxide** acute toxicity, fish: LC0: >10000 mg/l/96h [Brachydanio rerio, OECD 203]; acute toxicity, daphnia: EC0: >1000 mg/l/24h [Daphnia magna, OECD 202]; acute toxicity, algae: ErC50: >10000 mg/l/72h [Scenedesmus Subspicatus, OECD 201]; persistence and degradability: does not apply to inorganic substances. results of PBT and vPvB assessment: no PBT substance, no vPvB substance [24/Q2/2]

CAS No.: 471-34-1 EG No.: 207-439-9 Index No.: - Reg. No. (REACH): -	**calcium carbonate** acute toxicity, fish: LC50: >100 mg/l/96h [Oncorhynchus mykiss, OECD 203]; acute toxicity, fish: LC50: >1000 mg/l/48h [Oncorhynchus mykiss, OECD 203]; acute toxicity, daphnia: EC50: >1 mg/l/48h [Daphnia magna]; acute toxicity, algae: EC50: >200 mg/l/72h [Desmodesmus subspicatus]; acute toxicity, algae: EC50: >14 mg/l/72h [Desmodesmus subspicatus, OECD 201]; persistence and degradability: does not apply to inorganic substances; bioaccumulative potential: is not to be expected; acute bacteriotoxicity: EC50: >1000 mg/l/3h [activated sludge, OECD 209]; acute bacteriotoxicity: NOEC/NOEL: 1000 mg/l/3h [activated sludge, OECD 209]; other organisms: EC50: >1000 mg/kg dw /21d [Glycine max, OECD 208]; other organisms: EC50: >1000 mg/kg dw /21d [Lycopersicon esculentum, OECD 208]; other organisms: EC50: >1000 mg/kg dw /21d [Avena sativa, OECD 208]; other organisms: NOEC/NOEL: 1000 mg/kg dw /21d [Glycine max, OECD 208]; other organisms: NOEC/NOEL: 1000 mg/kg dw /21d [Lycopersicon esculentum, OECD 208]; other organisms: NOEC/NOEL: 1000 mg/kg dw /21d [Avena sativa, OECD 208]; other organisms: EC50: >1000 mg/kg dw/14d [Eisenia foetida, OECD 207]; other organisms: NOEC/NOEL: 1000 mg/kg dw/14d [Eisenia foetida, OECD 207]; other organisms: EC50: >1000 mg/kg dw/28d [OECD 216]; other organisms: NOEC/NOEL: 1000 mg/kg dw/28d [OECD 216];

	water solubility: 0.0166 g/l [OECD 105, 20°C] persistence and degradability: does not apply to inorganic substances; mobility in soil: n.a.; results of PBT and vPvB assessment: does not apply to inorganic substances [25/Q2/5]

13. Disposal considerations

13.1 Waste treatment methods

Waste disposal according to official state regulations.

Waste treatment options: 08 04 09 – Waste adhesives and sealants containing organic solvents or other dangerous substances. 08 05 01 – waste isocyanates
Contaminated packages: Disposal must be made according to official regulations. If possible empty packaging completely. CH: After complete hardening, product can be disposed of with domestic waste. Packagings that cannot be cleaned are to be disposed off in the same manner as the product. Alternatively, it can be used if necessary following waste code: 15 01 10 – Packing that contains the residues of hazardous materials or is contaminated through hazardous materials.
• The waste code numbers mentioned are recommendations based on the probable use of the product. The particular application and local disposal situation obtaining for the user may lead to other waste codes being assigned as well. • Switzerland: Following regulation in the latest valid constitution must be observed: Technical regulation on waste (TVA, SR 814.600), regulation for waste processing (VeVa, SR 814.610) and in the regulation of UVEK concerning lists for handling waste (LVA, SR 814.610.1).

14. Transport information

14.1 UN-Number:
ADR, RID, ADN, IMDG, IATA: Not applicable

14.2 UN proper shipping name
ADR, RID, ADN, IMDG, IATA: Not applicable

14.3 Transport hazard class(es):

ADR, RID, ADN, IMDG, IATA: Not applicable	

14.4 Packing group:
ADR, RID, ADN, IMDG, IATA: Not applicable

14.5 Enviromental hazards:
Dangerous to the environment: No
Marine pollutant: No

14.6 Special precautions for user:

Kemmler number:	Not applicable
EMS number:	Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Inapplicable

14.8 Additional information:

ADR: LQ – Limited Quantities:	Not applicable
ADR: Transport category:	Not applicable
ADR: Tunnel restriction code:	Not applicable
UN “Model Regulation”:	Inapplicable

15. Regulatory information

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

Classification and labelling see section 2.
The classification is based on the calculation method, unless otherwise stated.

Further national and further regulations, limitations and legal requirements

VOC content according to swiss VOC regulation (VOCV) see section 9.2.
Water hazard class (WGK) see section 12.1.
Observe employment restrictions for young people (CH: SR 822.115).
Observe Mutterschutzgesetz (DE) bzw. Mutterschutzverordnung (CH: SR 822.111.52).
Chemicals regulation (ChemV), ordinance on chemicals risk reduction (ChemRRV), Luftreinhalte-Verordnung (LRV), Ordinance on protection against major accidents (StFV), professional association principles/industrial medicine regulations

15.2 Chemical Safety Assessment
A chemical safety assessment is not provided for mixtures.

16. Other information

Hazards used in the document (H-phrases):

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 May probably cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure through inhalation (airways).

Other recommended sources for more information:
- Federal Office of Public Health (Switzerland): www.bag.admin.ch (German/French/Italian/English)

List of relevant abbreviations that may be used in the document:

Abbreviation	Full text / Meaning
ADR	Accord européen realtif au transport international des marchandises Dangereuses par Route (= European agreement concerning the international carriage of dangerouse goods by road)
AGW, Spb.-Üf.	AGW = Arbeitsplatzgrenzwert (occupational limit value), Spb.-Üf. = Spitzenbegrenzung (peak limit) – Überschreitungsfaktor (exceedance factor) (1 bis 8) and category (I, II) for short-term values (TRGS 900, germany)
AOEL	Acceptable Operator Exposure Level
Aquatic Acute	Hazardous to the aquatic environment - Acute
Aquatic Chronic	Hazardous to the aquatic environment – Chronic
Asp. Tox.	Aspiration hazard (Danger when inhaling)
ATE	Acute Toxicity Estimates
BAG	Office for health (Bundesamt für Gesundheit, Schweiz)
BAT	Biological tolerance values at the workplace (Biologische Arbeitsstofftoleranzwerte, Schweiz)
BG	Trade association (Berufsgenossenschaft)
BGR	Trade association regulations (Berufsgenossenschaftliche Regeln)
BGV	Trade association regulations (Berufsgenossenschaftliche Vorschrift)
Carz.	Carcinogenic substance
CAS-Nr.	Chemical Abstracts Service
CH	Swiss confederation (from the latin Confoederatio Helvetica)
CH: MAK:	Swiss limit of maximum allowable concentration, issued by the swiss accident insurance fund. (Schweizerischen Unfallversicherungsanstalt (SUVA)
CLP	Classification, Labelling and Packaing (REGULATION (EG) Nr. 1272/2008)
CPID	Chemical Product IDentification.
DMEL	Derived Minimum Effect Level
DNEL	Derived No Effect Level
EG-Nr.	Substances of the EC material inventory, consisting of 7 digits (Syntax: XXX-XXX-X). Comprises waste materials (EINECS), new substances (ELINCS) as well as the No-Longer-Polymers-Liste (NLP-Liste).
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Irrit.	Eye irritant, depending on the category Eye irritation possible to serious eye damage.
Flam. Gas	Flammable gas
Flam. Liq.	Flammable liquid
Flam. Sol.	Flammable solid
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IATA	International Air Transport Association

IMDG-Code	International Maritime Code for Dangerous Goods
Index-Nr.	Indexation of dangerous substances of appendix 5 in the VO(EG)1272/2008 (or annex I of directive 67/548/EWG) with the following syntax: XXX-XXX-XX-X
LC	Lethal concentration
LD	Lethal (fatal) dose
LD50	Lethal dose, 50%
Met. Corr.	On metal corrosive acting substance or mixture
Muta.	Substance with germ cell mutagenicity
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
Ozone	Hazardous for the ozone layer
PBT	Persistent, bioaccumulative, and toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Verordnung (EG) Nr. 1907/2006 zur Registrierung, Bewertung, Zulassung und Beschränkung chemischer Stoffe)
Repr.	Reproductive toxicity
Resp. Sens.	Sensitising for respiratory tract
SCL	Specific concentration limits
Skin Irrit.	Skin irritant – corrosive/irritant to skin
Skin Sens.	Sensitising for the skin
STOT RE	Specific target organ toxicity – repeated exposure
STOT SE	Specific target organ toxicity – single exposure
TRGS	Technical rules on hazardous substances
VOC	Volatile organic compounds
VOCV	VOC-regulation (Swiss)
vPvB	Very persistent and very bioaccumulative

Department issuing data specification sheet: See section 1.3.
This safety data sheet replaces all previous versions.

Disclaimer: The specifications rest on the today's stand of our knowledge. It does not constitute a legally binding assurance of specific product properties.

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