

Page 1 of 14 Page 1 of 14 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 19.10.2022 / 0015 Replacing version dated / version: 23.03.2022 / 0014	The mixture does not contain any substance with endocrine	disrupting properties (< 0,1 %).
Valid from: 19.10.2022 PDF print date: 19.10.2022 KNAPP PM+ KLEBER GLUE COLLA	SECTION 3: Composition/info	ormation on ingredients
Safety data sheet	3.1 Substances n.a.	
according to Regulation (EC) No 1907/2006, Annex II	3.2 Mixtures	I
SECTION 1: Identification of the substance/mixture and of the	Propylene carbonate Registration number (REACH)	01-2119537232-48-XXXX
company/undertaking	Index EINECS, ELINCS, NLP, REACH-IT List-No.	607-194-00-1 203-572-1
	CAS	108-32-7
1.1 Product identifier	content % Classification according to Regulation (EC) 1272/2008	1-<10 Eye Irrit. 2, H319
KNAPP PM+ KLEBER GLUE COLLA	(CLP), M-factors	
KNAPP PM+ KLEBER GLUE COLLA	4,4'-methylenediphenyl diisocyanate	
1.2 Relevant identified uses of the substance or mixture and uses advised	Registration number (REACH) Index	01-2119457014-47-XXXX 615-005-00-9
against	EINECS, ELINCS, NLP, REACH-IT List-No.	202-966-0 101-68-8
Relevant identified uses of the substance or mixture:	content %	1-<10
Adhesive Uses advised against:	Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H332 Skin Irrit. 2, H315
No information available at present.		Eye Irrit. 2, H319 Resp. Sens. 1, H334
1.3 Details of the supplier of the safety data sheet		Skin Sens. 1, H317 Carc. 2, H351
Knapp GmbH Wassergasse 31		STOT SE 3, H335
3324 Euratsfeld		STOT RE 2, H373 (respiratory system) (as inhalation)
Tel: +43 (0)7474 / 799 10 Fax: +43 (0)7474 / 799 10 99	Specific Concentration Limits and ATE	Skin Irrit. 2, H315: >=5 % Eye Irrit. 2, H319: >=5 %
mholzer@knapp-verbinder.com		Resp. Sens. 1, H334: >=0,1 %
		STOT SE 3, H335: >=5 %
Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO	o-(p-isocyanatobenzyl)phenyl isocyanate Registration number (REACH)	01-2119480143-45-XXXX
NOT use for requesting Safety Data Sheets.	Index	615-005-00-9
1.4 Emergency telephone number	EINECS, ELINCS, NLP, REACH-IT List-No. CAS	227-534-9 5873-54-1
Emergency information services / official advisory body:	content %	1-<10
Telephone number of the company in case of emergencies:	Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H332 Skin Irrit. 2, H315
+49 (0) 700 / 24 112 112 (WIC)		Eye Irrit. 2, H319 Resp. Sens. 1, H334
+1 872 5888271 (WIC)		Skin Sens. 1, H317
SECTION 2: Hazards identification		Carc. 2, H351 STOT SE 3, H335
		STOT RE 2, H373 (respiratory system) (as inhalation)
2.1 Classification of the substance or mixture	Specific Concentration Limits and ATE	Skin Irrit. 2, H315: >=5 %
Classification according to Regulation (EC) 1272/2008 (CLP)		Eye Irrit. 2, H319: >=5 % Resp. Sens. 1, H334: >=0,1 %
		Resp. Sells. 1, H334. >=0,1 %
Hazard class Hazard category Hazard statement		STOT SE 3, H335: >=5 %
Eye Irrit. 2 H319-Causes serious eye irritation.		
	Diphenylmethanediisocyanate, isomeres and homologues	STOT SE 3, H335: >=5 %
Eye Irrit.2H319-Causes serious eye irritation.STOT SE3H335-May cause respiratory irritation.Skin Irrit.2H315-Causes skin irritation.Resp. Sens.1H334-May cause allergy or asthma	homologues Registration number (REACH)	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h
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.	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No.	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h
Eye Irrit.2H319-Causes serious eye irritation.STOT SE3H335-May cause respiratory irritation.Skin Irrit.2H315-Causes skin irritation.Resp. Sens.1H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled.Skin Sens.1H317-May cause an allergic skin reaction.Carc.2H351-Suspected of causing cancer.	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content %	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h 9016-87-9 1.<10
Eye Irrit.2H319-Causes serious eye irritation.STOT SE3H335-May cause respiratory irritation.Skin Irrit.2H315-Causes skin irritation.Resp. Sens.1H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled.Skin Sens.1H317-May cause an allergic skin reaction.Carc.2H351-Suspected of causing cancer.STOT RE2H373-May cause damage to organs through	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content % Classification according to Regulation (EC) 1272/2008	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h
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 H373-May cause damage to organs through prolonged or repeated exposure by	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content %	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h 9016-87-9 1-<10 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319
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Eye Irrit.2H319-Causes serious eye irritation.STOT SE3H335-May cause respiratory irritation.Skin Irrit.2H315-Causes skin irritation.Resp. Sens.1H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled.Skin Sens.1H317-May cause an allergic skin reaction.Carc.2H351-Suspected of causing cancer.STOT RE2H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system).2.2 Label elements	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content % Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h
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Eye Irrit.2H319-Causes serious eye irritation.STOT SE3H335-May cause respiratory irritation.Skin Irrit.2H315-Causes skin irritation.Resp. Sens.1H315-Causes skin irritation.Skin Sens.1H317-May cause allergy or asthma symptoms or breathing difficulties if inhaled.Skin Sens.1H317-May cause an allergic skin reaction.Carc.2H351-Suspected of causing cancer.STOT RE2H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system).2.2 Label elements	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS Content % Classification according to Regulation (EC) 1272/2008 (CLP), M-factors Specific Concentration Limits and ATE Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm) Registration number (REACH)	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h 9016-87-9 1-<10
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 H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system). 2.2 Label elements Labeling according to Regulation (EC) 1272/2008 (CLP)	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS Content % Classification according to Regulation (EC) 1272/2008 (CLP), M-factors Specific Concentration Limits and ATE Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm) Registration number (REACH) Index	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h 9016-87-9 1-<10
Eye Irrit.2H319-Causes serious eye irritation.STOT SE3H335-May cause respiratory irritation.Skin Irrit.2H315-Causes skin irritation.Resp. Sens.1H315-Causes skin irritation.Skin Sens.1H317-May cause allergy or asthma symptoms or breathing difficulties if inhaled.Skin Sens.1H317-May cause an allergic skin reaction.Carc.2H351-Suspected of causing cancer.STOT RE2H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system).2.2 Label elements	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content % Classification according to Regulation (EC) 1272/2008 (CLP), M-factors Specific Concentration Limits and ATE Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h 9016-87-9 1-<10
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. STOT RE 2 H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system). 2.2 Label elements Labeling according to Regulation (EC) 1272/2008 (CLP) Danger	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content % Classification according to Regulation (EC) 1272/2008 (CLP), M-factors Specific Concentration Limits and ATE Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 μm)	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h 9016-87-9 1-<10
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 H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system). Stabel elements Labeling according to Regulation (EC) 1272/2008 (CLP)	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content % Classification according to Regulation (EC) 1272/2008 (CLP), M-factors Specific Concentration Limits and ATE Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h
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 H34-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. STOT RE 2 H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system). 2.2 Label elements Labeling according to Regulation (EC) 1272/2008 (CLP) 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. 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.	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content % Classification according to Regulation (EC) 1272/2008 (CLP), M-factors Specific Concentration Limits and ATE Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h 9016-87-9 1-<10
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 H344-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. STOT RE 2 H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system). 2.2 Label elements Labeling according to Regulation (EC) 1272/2008 (CLP) Volume Volume Volume H319-Causes serious eye irritation. H335-May cause respiratory irritation. H319-Causes serious eye irritation. H335-May cause respiratory irritation. H319-Causes serious eye irritation. H315-Causes skin irritation. H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled. H319-Causes and lengic skin reaction. H35-Suspected of causing cancer. H319-Causes and lengic skin reaction. H35-Suspected of causing cancer. H319-Causes and lengic skin reaction. H35-Suspected of causing cancer. H317-May cause an allergic skin reaction. H31	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content % Classification according to Regulation (EC) 1272/2008 (CLP), M-factors Specific Concentration Limits and ATE Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h 9016-87-9 1-<10
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 H315-Causes skin irritation. Resp. Sens. 1 H317-May cause allergy or asthma symptoms or breathing difficulties if inhaled. Skin Sens. 1 H317-May cause an allergic skin reaction. Carc. 2 H371-Suspected of causing cancer. STOT RE 2 H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system). 2.2 Label elements Labeling according to Regulation (EC) 1272/2008 (CLP) Volume Volume Volume H319-Causes serious eye irritation. H335-May cause respiratory irritation. H319-Causes serious eye irritation. H335-May cause are respiratory irritation. H319-Causes serious eye irritation. H335-May cause respiratory irritation. H319-Causes serious eye irritation. H35-May cause and lergic skin reaction. H319-Causes and lergic skin reaction. H35-Suspected of causing cancer. H319-Causes and lergic skin reaction. H35-Suspected of causing cancer. H319-Causes and lergic skin reaction. H317-May c	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content % Classification according to Regulation (EC) 1272/2008 (CLP), M-factors Specific Concentration Limits and ATE Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h
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 H314-May cause allergy or asthma symptoms or breathing difficulties if inhaled. Skin Sens. 1 H317-May cause an allergy or asthma symptoms or breathing difficulties if inhaled. Skin Sens. 1 H317-May cause an allergy or asthma symptoms or repeated of causing cancer. STOT RE 2 H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system). 2.2 Label elements Labeling according to Regulation (EC) 1272/2008 (CLP) Void Darger 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 allergy or asthma symptoms or breathing difficulties if inhaled. H317-May cause anallergy is in reaction. H315-Suspected of causing cancer. H319-Causes skin irritation. H336-May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317-May cause anallergy or asthma symptoms or breathing difficulties if inhaled. H317-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system). P201-Obtain special instructions before use. P260-D0 not breathe vapours or spray. P280-Wear protective gloves / protective clothing / eye protection / face protection. P284-Wear respiratory protection.	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content % Classification according to Regulation (EC) 1272/2008 (CLP), M-factors Specific Concentration Limits and ATE Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h 9016-87-9 1-<10 Acute Tox. 4, H332 Skin Irit. 2, H315 Eye Irit. 2, H315 Eye Irit. 2, H317 Carc. 2, H351 STOT RE 2, H373 (respiratory system) (as inhalation) Skin Irit. 2, H315: >=5 % Eye Irit. 2, H319: >=5 % Eye Irit. 2, H319: >=5 % Istor SE 3, H334: >=0,1 % STOT SE 3, H335: >=5 % 01-2119489379-17-XXXX 022-006-002 236-675-5 13463-67-7 <5 Carc. 2, H351 (as inhalation) 01-2119927323-43-XXXX 615-005-00-9 219-799-4 238-05-2 0,1-<1
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 H314-May cause allergy or asthma symptoms or breathing difficulties if inhaled. Skin Sens. 1 H317-May cause an allergy casthma symptoms or breathing difficulties if inhaled. Carc. 2 H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system). St.1 Labeling according to Regulation (EC) 1272/2008 (CLP) Volume Volume H319-Causes serious eye irritation. H35-May cause damage to argans through prolonged or repeated exposure by inhalation (respiratory system). H319-Causes serious eye irritation. H35-May cause respiratory irritation. H315-Causes skin H319-Causes serious eye irritation. H35-May cause respiratory irritation. H315-Causes skin H319-Causes serious eye irritation. H35-Suspected of causing cancer. H317-May cause damage to organs through prolonged or repeated exposure or breathing difficulties if inhaled. H39-Causes serious eye irritation. H35-Suspected of causing cancer. H317-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system). P201-Obtain special instructions b	homologues Registration number (REACH) Index EINECS, ELINCS, NLP, REACH-IT List-No. CAS content %. Classification according to Regulation (EC) 1272/2008 (CLP), M-factors Specific Concentration Limits and ATE Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 µm)	STOT SE 3, H335: >=5 % ATE (as inhalation, Aerosol): 1,5 mg/l/4h Stin Irit. 2, H316: >=5 % Eye Irit. 2, H317 (cespiratory system) (as inhalation) STOT SE 3, H335: >=5 % O1-2119489379-17-XXXX 022-006-002 236-675-5 13463-67-7 <5
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Bage 2 of 14	7.1 Procentions for sets handling
	7.1 Precautions for safe handling 7.1.1 General recommendations
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II	Ensure good ventilation.
Revision date / version: 19.10.2022 / 0015 Replacing version dated / version: 23.03.2022 / 0014	Avoid inhalation of the vapours.
Valid from: 19.10.2022	If applicable, suction measures at the workstation or on the processing machine necessary. Avoid contact with eyes or skin.
PDF print date: 19.10.2022 KNAPP PM+ KLEBER GLUE COLLA	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 4: First aid measures	Use working methods according to operating instructions.
	7.1.2 Notes on general hygiene measures at the workplace
4.1 Description of first aid measures	General hygiene measures for the handling of chemicals are applicable. Wash hands before breaks and at end of work.
First-aiders should ensure they are protected!	Keep away from food, drink and animal feedingstuffs.
Never pour anything into the mouth of an unconscious person!	Remove contaminated clothing and protective equipment before entering areas in which food is consumed.
Inhalation Remove person from danger area.	7.2 Conditions for safe storage, including any incompatibilities Keep out of access to unauthorised individuals.
Supply person with fresh air and consult doctor according to symptoms.	Not to be stored in gangways or stair wells.
If the person is unconscious, place in a stable side position and consult a doctor. Respiratory arrest - Artificial respiration apparatus necessary.	Store product closed and only in original packing. Keep protected from direct sunlight and temperatures over 50°C.
Skin contact	Only store at temperatures from to .
Wipe off residual product carefully with a soft, dry cloth.	Store in a dry place.
Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.	7.3 Specific end use(s) Adhesive
Dab away with polyethylene glycol 400	
Eye contact	SECTION 8: Exposure controls/personal protection
Remove contact lenses. Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.	
Ingestion	8.1 Control parameters
Rinse the mouth thoroughly with water.	
Do not induce vomiting - give copious water to drink. Consult doctor immediately. 4.2 Most important symptoms and effects, both acute and delayed	Chemical Name 4,4'-methylenediphenyl diisocyanate WEL-TWA: 0,02 mg/m3 (Isocyanates, WEL-STEL: 0,07 mg/m3 (Isocyanates,
If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.	all (as -NCO)) all (as -NCO))
The following may occur: Dermatitis (skin inflammation)	Monitoring procedures: ISO 16702 (Workplace air quality – determination of total isocyanate groups in air using 2-(1-methoxyphenylpiperazine and
Drying of the skin.	- liquid chromatography) - 2007
Allergic contact eczema	MDHS 25/4 (Organic isocyanates in air – Laboratory method using sampling either onto 2-(1-methoxyphenylpiperazine coated glass
Discoloration of the skin Irritant to mucosa of the nose and throat	fibre filters followed by solvent desorption or into impingers and
Coughing	analysis using high performance liquid chromatography) - 2015 - - EU project BC/CEN/ENTR/000/2002-16 card 7-4 (2004)
Headaches Effect on the central nervous system	- NIOSH 5521 (ISOCYANATES, MONOMERIC) - 1994
Asthmatic symptoms	- NIOSH 5522 (ISOCYANATES) - 1998
In case of sensitivity, concentrations below the limit value may already result in asthmatic symptoms. Respiratory distress	 NIOSH 5525 (ISOCYANATES, TOTAL (MAP)) - 2003 OSHA 18 (Diisocyanates 2,4-TDI and MDI) - 1980
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.	- OSHA 47 (Methylene Bisphenyl Isocyanate (MDI)) - 1984
4.3 Indication of any immediate medical attention and special treatment needed	BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine (At the end of the period of exposure) Other information: Sen (Isocyanates, all (as -NCO))
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.	GP Chemical Name o-(p-isocyanatobenzyl)phenyl isocyanate WEL-TWA: 0,02 mg/m3 (isocyanates, all (as -NCO))
SECTION 5: Firefighting measures	
	Monitoring procedures: BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine Other information: Sen
5.1 Extinguishing media	(At the end of the period of exposure) (Isocyanates, all (as -NCO))
Suitable extinguishing media	GB Chemical Name Diphenylmethanediisocyanate, isomeres and homologues
CO2	TWEL-TWA: 0,02 mg/m3 (Isocyanates, WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as -NCO)) all (as -NCO))
Extinction powder	all (as -NCO)) all (as -NCO)) Monitoring procedures:
Water jet spray Foam	BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine Other information: Sen
Unsuitable extinguishing media	(At the end of the period of exposure) (Isocyanates, all (as -NCO))
High volume water jet	Chemical Name Titanium dioxide (in powder form containing 1 % or more of particles with aerodynamic diameter <= 10 μm)
5.2 Special hazards arising from the substance or mixture In case of fire the following can develop:	WEL-TWA: 10 mg/m3 (total inhalable WEL-STEL:
Oxides of carbon	dust), 4 mg/m3 (respirable dust) Monitoring procedures:
Oxides of nitrogen Isocyanates	BMGV: Other information:
Hydrocyanic acid (hydrogen cyanide)	GB) Chemical Name 2,2'-methylenediphenyl diisocyanate
Toxic gases 5.3 Advice for firefighters	WEL-TWA: 0,02 mg/m3 (Isocyanates, WEL-STEL: 0,07 mg/m3 (Isocyanates,
For personal protective equipment see Section 8.	all (as -NCO)) all (as -NCO)) Monitoring procedures:
In case of fire and/or explosion do not breathe fumes.	BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine Other information: Sen
Protective respirator with independent air supply. According to size of fire	(At the end of the period of exposure) (Isocyanates, all (as -NCO))
Full protection, if necessary.	GB Chemical Name 4,4'-methylenediphenyl diisocyanate
Cool container at risk with water. Dispose of contaminated extinction water according to official regulations.	GE Chemical Name 4,4-methylenediphenyl diisocyanate WEL-TVA: 0,02 mg/m3 (Isocyanates, all (as -NCO))
	Monitoring procedures: ISO 16702 (Workplace air quality – determination of total
SECTION 6: Accidental release measures	isocyanate groups in air using 2-(1-methoxyphenylpiperazine and liquid chromatography) - 2007
	MDHS 25/4 (Organic isocvanates in air – Laboratory method using
6.1 Personal precautions, protective equipment and emergency procedures	sampling either onto 2-(1-methoxyphenylpiperazine coated glass fibre filters followed by solvent desorption or into impingers and
6.1.1 For non-emergency personnel	analysis using high performance liquid chromatography) - 2015 -
In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.	- EU project BC/CEN/ENTR/000/2002-16 card 7-4 (2004)
Ensure sufficient ventilation, remove sources of ignition.	- NIOSH 5521 (ISOCYANATES, MONOMERIC) - 1994 - NIOSH 5522 (ISOCYANATES) - 1998
Avoid dust formation with solid or powder products. Leave the danger zone if possible, use existing emergency plans if necessary.	- NIOSH 5525 (ISOCYANATES, TOTAL (MAP)) - 2003
Ensure sufficient supply of air.	 OSHA 18 (Diisocyanates 2,4-TDI and MDI) - 1980 OSHA 47 (Methylene Bisphenyl Isocyanate (MDI)) - 1984
Avoid inhalation, and contact with eyes or skin. If applicable, caution - risk of slipping.	BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine Other information: Sen
6.1.2 For emergency responders	(At the end of the period of exposure) (Isocyanates, all (as -NCO))
See section 8 for suitable protective equipment and material specifications.	GB Chemical Name Silicon dioxide
6.2 Environmental precautions	WEL-TWA: 6 mg/m3 (total inh. dust), WEL-STEL:
If leakage occurs, dam up. Resolve leaks if this possible without risk.	Monitoring procedures:
Prevent surface and ground-water infiltration, as well as ground penetration.	BMGV: Other information:
Prevent from entering drainage system. If accidental entry into drainage system occurs, inform responsible authorities.	GB Chemical Name o-(p-isocyanatobenzyl)phenyl isocyanate
6.3 Methods and material for containment and cleaning up	TWEL-TWA: 0,02 mg/m3 (Isocyanates, WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as -NCO)) all (as -NCO))
Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and	Monitoring procedures:
dispose of according to Section 13. Allow to stand for a few days in an unclosed container until reaction no longer occurs.	BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine Other information: Sen
Keep moist.	(At the end of the period of exposure) (Isocyanates, all (as -NCO))
Do not close packing drum. CO2 formation in closed tanks causes pressure to rise.	Chemical Name Calcium carbonate WEL-TWA: 4 mg/m3 (respirable dust), WEL-STEL:
6.4 Reference to other sections	TWEL-TWA: 4 mg/m3 (respirable dust), WEL-STEL:
For personal protective equipment see Section 8 and for disposal instructions see Section 13.	Monitoring procedures:
SECTION 7: Handling and storage	BMGV: Other information:
oconton 7. Handling and Storage	Chemical Name Diphenylmethanediisocyanate, isomeres and homologues WEL TWA: 0.02 mm/m2 (local packs)
In addition to information given in this section, relevant information can also be found in section 8 and 6.1.	GP Chemical Name Diphenylmethanediisocyanate, isomeres and homologues WEL-TWA: 0,02 mg/m3 (Isocyanates, all (as -NCO))
of a second of growth and solution, relevant mornation out also be round in section of all 0.1.	



B) Page 3 of 14 Safety data sheet acco													
Page 3 of 14							Consumer	Human - oral	Short term,	DNEL	20	mg/kg	
Safety data sheet acco Revision date / version	ording to Regulation (EC)	No 1907/2006, Anne	x II				Consumer	Human - dermal	systemic effects Short term,	DNEL	17,2	bw/day mg/cm	
Replacing version date	ed / version: 23.03.2022 /	0014							local effects			2	
Valid from: 19.10.2022 PDF print date: 19.10.2							Consumer	Human - dermal	Short term, systemic effects	DNEL	25	mg/kg bw/d	
KNAPP PM+ KLEBER							Consumer	Human - inhalation	Short term,	DNEL	0,05	mg/m3	
Monitoring procedures							Consumer	Human - inhalation	local effects Short term,	DNEL	0,05	mg/m3	
BMGV: 1 µmol isocy (At the end of the period	anate-derived diamine/mo	ol creatinine in urine		nformation	n: Sen (as -NCO))		Consumer	Human - inhalation	systemic effects Long term,	DNEL	0,02	mg/m3	
fra ale end of ale pend			(1300)4	natos, an					local effects		5	-	
							Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,02 5	mg/m3	
Propylene carbonate Area of application	Exposure route /	Effect on	Descri	Valu	Unit	Note	Workers /	Human - dermal	Short term,	DNEL	50	mg/kg bw/d	
and of application	Environmental	health	ptor	e			employees Workers /	Human - dermal	systemic effects Short term,	DNEL	28,7	mg/cm	
	compartment Environment -		PNEC	9	mg/l		employees Workers /	Human - inhalation	local effects Short term,	DNEL	0,1	2 mg/m3	
	sporadic						employees		systemic effects				
	(intermittent) release Environment -		PNEC	0,09	mg/l		Workers / employees	Human - inhalation	Short term, local effects	DNEL	0,1	mg/m3	
	marine Environment -		PNEC	0,08	mg/l		Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m3	
	sediment, marine			3	-		Workers /	Human - inhalation	Long term,	DNEL	0,05	mg/m3	
	Environment - soil Environment -		PNEC PNEC	0,81 0,9	mg/l mg/l		employees		local effects			<u> </u>	
	freshwater Environment -		PNEC	0,83	mg/l		Titanium dioxide (in	powder form containing	1 % or more of part	icles with	aerodyna	amic diame	ter <- 10
	sediment, freshwater				-		μm)						
	Environment - sewage treatment		PNEC	740 0	mg/l		Area of application	Exposure route / Environmental	Effect on health	Descri ptor	Valu e	Unit	Note
Consumer	plant Human - oral	Long term,	DNEL	10	mg/kg			compartment					
		systemic effects						Environment - freshwater		PNEC	0,18 4	mg/l	
Consumer	Human - dermal	Long term, systemic effects	DNEL	10	mg/kg			Environment - marine		PNEC	0,01 84	mg/l	
Consumer	Human - inhalation	Long term,	DNEL	10	mg/m3		1	Environment -		PNEC	0,19	mg/l	
Consumer	Human - inhalation	local effects Long term,	DNEL	17,4	mg/m3			water, sporadic (intermittent) release			3		
Workers /	Human - inhalation	systemic effects Long term,	DNEL	70,5	mg/kg			Environment - sewage treatment		PNEC	100	mg/l	
employees		systemic effects		3				plant		_			
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	176	mg/m3]	Environment - sediment, freshwater		PNEC	100 0	mg/kg dw	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	20	mg/kg			Environment -		PNEC	100	mg/kg	
Workers /	Human - inhalation	Long term,	DNEL	20	mg/m3			sediment, marine Environment - soil		PNEC	100	dw mg/kg	
employees		local effects						Environment - oral		PNEC	166	dw mg/kg	
4,4'-methylenedipher	avi diisooyanata							(animal feed)		-	7	feed	
Area of application	Exposure route /	Effect on	Descri	Valu	Unit	Note	Consumer	Human - oral	Long term, systemic effects	DNEL	700	mg/kg bw/d	
	Environmental compartment	health	ptor	e			Workers / employees	Human - inhalation	Long term, local effects	DNEL	10	mg/m3	
	Environment - freshwater		PNEC	3,7	µg/l							L	
	Environment -		PNEC	0,37	µg/l		2,2'-methylenedipher						
	marine Environment -		PNEC	1	mg/l		Area of application	Exposure route / Environmental	Effect on health	Descri ptor	Valu e	Unit	Note
	sewage treatment		THEO	'	l ing/i			compartment	neaith		e		
	plant Environment - soil		PNEC	2,33	mg/kg			Environment - freshwater		PNEC	1	mg/l	
	Environment -		PNEC	37	dw µg/l			Environment -		PNEC	0,1	mg/l	
	sporadic		TNEO	57	μ9/1			marine Environment -		PNEC	1	mg/l	
	(intermittent) release Environment -		PNEC	11,7	mg/kg			sewage treatment plant					
	sediment, freshwater				dry weight			Environment - soil		PNEC	1	mg/kg	
	Environment -		PNEC	1,17	mg/kg			Environment -		PNEC	10	dw mg/l	
	sediment, marine				dry weight			water, sporadic (intermittent) release				-	
Consumer	Human - oral	Short term,	DNEL	20	mg/kg		Consumer	Human - oral	Short term,	DNEL	20	mg/kg	
Consumer	Human - dermal	systemic effects Short term,	DNEL	17,2	bw/day mg/cm		Consumer	Human - dermal	systemic effects Short term,	DNEL	17,2	bw/d mg/cm	
Consumer	Human - dermal	local effects Short term,	DNEL	25	2 mg/kg		Consumer	Human - dermal	local effects Short term,	DNEL	25	2	
		systemic effects			bw/day				systemic effects			mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL	0,05	mg/m3		Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,05	mg/m3	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,05	mg/m3		Consumer	Human - inhalation	Short term, local effects	DNEL	0,05	mg/m3	
Consumer	Human - inhalation	Long term,	DNEL	0,02	mg/m3		Consumer	Human - inhalation	Long term,	DNEL	0,02	mg/m3	
			DNEL	5 0,02	mg/m3		Consumer	Human - inhalation	systemic effects Long term,	DNEL	5 0,02	mg/m3	
Consumer	Human - inhalation	local effects Long term,	DINEL		-						5	-	
		Long term, systemic effects		5	ma/cm	1			local effects	DUE		mg/cm	
Workers / employees	Human - dermal	Long term, systemic effects Short term, local effects	DNEL	28,7	mg/cm 2		Workers / employees	Human - dermal	Short term, local effects	DNEL	28,7	2	
Workers / employees Workers /		Long term, systemic effects Short term, local effects Short term,			2 mg/kg		employees Workers /	Human - dermal Human - dermal	Short term, local effects Short term,	DNEL DNEL		2 mg/kg	
Workers / employees Workers / employees Workers /	Human - dermal	Long term, systemic effects Short term, local effects Short term, systemic effects Short term,	DNEL	28,7	2		Workers / employees Workers /		Short term, local effects Short term, systemic effects Short term,		28,7	2	
Workers / employees Workers / employees Workers / employees Workers /	Human - dermal Human - dermal	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Short term,	DNEL DNEL	28,7 50	2 mg/kg bw/day		employees Workers / employees	Human - dermal	Short term, local effects Short term, systemic effects	DNEL DNEL	28,7 50	2 mg/kg bw/d mg/m3	
Workers / employees Workers / employees Workers / employees Workers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects	DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1	2 mg/kg bw/day mg/m3 mg/m3		employees Workers / employees Workers / employees Workers / employees	Human - dermal Human - inhalation Human - inhalation	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects	DNEL DNEL DNEL	28,7 50 0,1 0,1	2 mg/kg bw/d mg/m3 mg/m3	
Workers / employees Workers / employees Workers / employees Workers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation Human - inhalation	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Long term, local effects	DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05	2 mg/kg bw/day mg/m3 mg/m3 mg/m3		employees Workers / employees Workers / employees Workers / employees Workers / employees	Human - dermal Human - inhalation Human - inhalation Human - inhalation	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, systemic effects	DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05	2 mg/kg bw/d mg/m3 mg/m3 mg/m3	
Workers / employees Workers / employees Workers / employees Workers / employees Workers /	Human - dermal Human - dermal Human - inhalation Human - inhalation	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term,	DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1	2 mg/kg bw/day mg/m3 mg/m3		employees Workers / employees Workers / employees Workers / employees Workers / employees Workers /	Human - dermal Human - inhalation Human - inhalation	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term,	DNEL DNEL DNEL	28,7 50 0,1 0,1	2 mg/kg bw/d mg/m3 mg/m3	
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Workers /	Human - dermal Human - dermal Human - inhalation Human - inhalation Human - inhalation	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, systemic effects Long term, local effects Long term,	DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05	2 mg/kg bw/day mg/m3 mg/m3 mg/m3		employees Workers / employees Workers / employees Workers / employees Workers / employees	Human - dermal Human - inhalation Human - inhalation Human - inhalation	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, systemic effects	DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05	2 mg/kg bw/d mg/m3 mg/m3 mg/m3	
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Orkers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation Human - inhalation Human - inhalation	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Long term, local effects Long term, systemic effects Long term, systemic effects	DNEL DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05 0,05	2 mg/kg bw/day mg/m3 mg/m3 mg/m3		employees Workers / employees Workers / employees Workers / employees Workers / employees Workers /	Human - dermal Human - inhalation Human - inhalation Human - inhalation Human - inhalation	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, systemic effects	DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05	2 mg/kg bw/d mg/m3 mg/m3 mg/m3	
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation Human - inhalation	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, systemic effects Long term, local effects Long term,	DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05	2 mg/kg bw/day mg/m3 mg/m3 mg/m3	Note	employees Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees	Human - dermal Human - inhalation Human - inhalation Human - inhalation Human - inhalation	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, local effects Long term, local effects	DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05 0,05 Valu	2 mg/kg bw/d mg/m3 mg/m3 mg/m3	Note
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Orkers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation Human - inhalation Human - inhalation Human - inhalation YI)phenyl isocyanate Exposure route / Environmental compartment	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Long term, local effects Long term, systemic effects Eng term, systemic effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05 0,05 Valu e	2 mg/kg bw/day mg/m3 mg/m3 mg/m3 mg/m3	Note	employees Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees 4,4'-methylenedipher	Human - dermal Human - inhalation Human - inhalation Human - inhalation Human - inhalation Human - inhalation hyl diisocyanate Exposure route / Environmental compartment	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, systemic effects Long term, local effects	DNEL DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05 0,05 Valu e	2 mg/kg bw/d mg/m3 mg/m3 mg/m3 mg/m3	Note
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Orkers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation Human - inhalation Human - inhalation Human - inhalation Human - inhalation yl)phenyl isocyanate Exprormental <u>compartment</u> Environmental freshwater	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Long term, local effects Long term, systemic effects Eng term, systemic effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,05 0,05 Valu	2 mg/kg bw/day mg/m3 mg/m3 mg/m3 mg/m3	Note	employees Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees 4,4'-methylenedipher	Human - dermal Human - inhalation Human - inhalation	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, local effects Long term, local effects	DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05 0,05 Valu	2 mg/kg bw/d mg/m3 mg/m3 mg/m3 mg/m3	Note
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Orkers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation Human - inhalation Human - inhalation Wiphenyl isocyanate Exposure route / Environmental compartment Environment - freshwater Environment -	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Long term, local effects Long term, systemic effects Eng term, systemic effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05 0,05 Valu e	2 mg/kg bw/day mg/m3 mg/m3 mg/m3 mg/m3	Note	employees Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees 4,4'-methylenedipher	Human - dermal Human - inhalation Human - inhalation	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, local effects Long term, local effects	DNEL DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05 0,05 Valu e	2 mg/kg bw/d mg/m3 mg/m3 mg/m3 mg/m3	Note
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Orkers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Long term, local effects Long term, systemic effects Eng term, systemic effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,05 0,05 Valu e 1	2 mg/kg bw/day mg/m3 mg/m3 mg/m3 Unit mg/l	Note	employees Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees 4,4'-methylenedipher	Human - dermal Human - inhalation Human - inhalation Human - inhalation Human - inhalation Nyl diisocyanate Exposure route / Environmental compartment Erwironment - freshwater	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, local effects Long term, local effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL PNEC	28,7 50 0,1 0,05 0,05 Valu e 1	2 mg/kg bw/d mg/m3 mg/m3 mg/m3 mg/m3 Unit	Note
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Orkers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation Human - inhalation Human - inhalation Human - inhalation Human - inhalation V)phenyl isocyanate Environmental Compartment Environment - freshwater Environment - freshwater Environment - marine	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Long term, local effects Long term, systemic effects Eng term, systemic effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,05 0,05 Valu e 1 0,1	2 mg/kg bw/day mg/m3 mg/m3 mg/m3 mg/m3 Unit Unit	Note	employees Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees 4,4'-methylenedipher	Human - dermal Human - inhalation Human - inhalation Exposure route / Environment - freshwater Environment - freshwater Environment - marine Environment - soil	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, local effects Long term, local effects	DNEL DNEL DNEL DNEL DNEL DNEL PNEC PNEC PNEC	28,7 50 0,1 0,05 0,05 Valu e 1 0,1	2 mg/kg bw/d mg/m3 mg/m3 mg/m3 mg/m3 Unit mg/l mg/l mg/kg dw	Note
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Orkers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation Hu	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Long term, local effects Long term, systemic effects Eng term, systemic effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL PNEC PNEC	28,7 50 0,1 0,05 0,05 Valu e 1 0,1	2 mg/kg mg/m3 mg/m3 mg/m3 mg/m3 mg/m3 mg/m3 mg/m3 mg/m3 mg/mg/ mg/l mg/l	Note	employees Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees 4,4'-methylenedipher	Human - dermal Human - inhalation Human - inhalation Exposure route / Environmental Compartment Environment - marine Environment - soil Environment - soil Environment - soil	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, local effects Long term, local effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL PNEC PNEC	28,7 50 0,1 0,1 0,05 0,05 Valu e 1 0,1 1	2 mg/kg bw/d mg/m3 mg/m3 mg/m3 mg/m3 Unit Unit mg/l mg/l	Note
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Orkers / employees	Human - dermal Human - dermal Human - inhalation Human - inhala	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Long term, local effects Long term, systemic effects Eng term, systemic effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,05 0,05 Valu e 1 0,1 1	2 mg/kg bw/day mg/m3 mg/m3 mg/m3 Unit mg/l mg/l	Note	employees Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees 4,4'-methylenedipher	Human - dermal Human - inhalation Human - inhalation Environment a Environment - freshwater Environment - marine Environment - soil Environment - soil	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, local effects Long term, local effects	DNEL DNEL DNEL DNEL DNEL DNEL PNEC PNEC PNEC	28,7 50 0,1 0,1 0,05 0,05 Valu e 1 0,1 1	2 mg/kg bw/d mg/m3 mg/m3 mg/m3 mg/m3 Unit mg/l mg/l mg/kg dw	Note
Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees Orkers / employees	Human - dermal Human - dermal Human - inhalation Human - inhalation Hu	Long term, systemic effects Short term, local effects Short term, systemic effects Short term, local effects Long term, local effects Long term, systemic effects Eng term, systemic effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL DNEL	28,7 50 0,1 0,1 0,05 0,05 Valu e 1 0,1 1 1	2 mg/kg bw/day mg/m3 mg/m3 mg/m3 Unit mg/n mg/l mg/l mg/kg dw	Note	employees Workers / employees Workers / employees Workers / employees Workers / employees Workers / employees 4,4'-methylenedipher	Human - dermal Human - inhalation Human - inhalation Environment a Environment - freshwater Environment - marine Environment - sewage treatment plant	Short term, local effects Short term, systemic effects Short term, local effects Short term, systemic effects Long term, local effects Long term, local effects	DNEL DNEL DNEL DNEL DNEL DNEL DNEL PNEC PNEC PNEC	28,7 50 0,1 0,05 0,05 Valu e 1 0,1 1 1	2 mg/kg bw/d mg/m3 mg/m3 mg/m3 mg/m3 Unit mg/l mg/l mg/l mg/kg dw mg/l	Note



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Consumer	Human - dermal	Short term.	DNEL	25	mg/kg	
Consumer	Human - German	systemic effects	DINEL	25	bw/d	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,05	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	20	mg/kg bw/d	
Consumer	Human - dermal	Short term, local effects	DNEL	17,2	mg/cm 2	
Consumer	Human - inhalation	Short term, local effects	DNEL	0,05	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,02 5	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,02 5	mg/m3	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	50	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	0,1	mg/m3	
Workers / employees	Human - dermal	Short term, local effects	DNEL	28,7	mg/cm 2	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	0,1	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	mg/m3	

o-(p-isocyanatobenzy Area of application	Exposure route / Environmental compartment	Effect on health	Descri ptor	Valu e	Unit	Note
	Environment - freshwater		PNEC	1	mg/l	
	Environment - marine		PNEC	0,1	mg/l	
	Environment - soil		PNEC	1	mg/kg dry weight	
	Environment - sewage treatment plant		PNEC	1	mg/Ī	
Consumer	Human - dermal	Short term, systemic effects	DNEL	25	mg/kg body weight/ day	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,05	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	20	mg/kg body weight/ day	
Consumer	Human - dermal	Short term, local effects	DNEL	17,2	mg/cm 2	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,02 5	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,02 5	mg/m3	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	50	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	0,1	mg/m3	
Workers / employees	Human - dermal	Short term, local effects	DNEL	28,7	mg/cm 2	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	0,1	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	mg/m3	

Area of application	ecyanate, isomeres and Exposure route /	Effect on	Descri	Valu	Unit	Note
Area or application	Environmental	health	ptor	e	onic	Note
	compartment	nearm	pion	e		
	Environment -		PNEC	1	mg/l	
	freshwater		FINEC	'	ing/i	
	Environment -		PNEC	0.1	mg/l	
	marine		FINEC	0,1	iiig/i	
	Environment -		PNEC	10	mg/l	
	water, sporadic		FINEC	10	ing/i	
	(intermittent) release					
	Environment -		PNEC	1	mg/l	
			FINEC	·	iiig/i	
	sewage treatment plant					
	Environment - soil		PNEC	1	mg/kg	
Consumer	Human - oral	Short term.	DNEL	20	mg/kg	
Consumer	Human - orai		DINEL	20		
Consumer	Human - inhalation	local effects Short term.	DNEL	0.05	bw/d	
Consumer	Human - Innalation	local effects	DNEL	0,05	mg/m3	
0	Human - inhalation		DNEL	0.05		
Consumer	Human - Innalation	Short term,	DNEL	0,05	mg/m3	
Consumer	Human - inhalation	systemic effects Long term.	DNEL	0.02	ma/m3	
Consumer	Human - Innalation	local effects	DINEL		mg/m3	
Consumer	Human - inhalation	Long term,	DNEL	5 0.02	mg/m3	
Consumer	Human - Innalation		DINEL		mg/m3	
0	Human - dermal	systemic effects	DNEL	5		
Consumer	Human - dermai	Short term, local effects	DNEL	17,2	mg/cm 2	
0	Library and the second		DNIEL	05	_	
Consumer	Human - dermal	Short term,	DNEL	25	mg/kg bw/d	
Workers /	Human - inhalation	systemic effects Short term.	DNEL	0.1		
	Human - Innalation		DNEL	0,1	mg/m3	
employees		local effects				
Workers /	Human - inhalation	Short term,	DNEL	0,1	mg/m3	
employees	Linear Saladar	systemic effects	DNE	0.05		
Workers /	Human - inhalation	Long term,	DNEL	0,05	mg/m3	
employees		local effects				
Workers /	Human - inhalation	Long term,	DNEL	0,05	mg/m3	
employees		systemic effects				

Workers /	Human - dermal	Short term,	DNEL	28,7	mg/cm	
employees		local effects			2	
Workers /	Human - dermal	Short term,	DNEL	50	mg/kg	
employees		systemic effects			bw/d	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "rhoeitsplatzgrenzwert" (workplace limit value, Germany). (8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0.002 mg Cd/g creatinne in urine (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute

reference period). (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU), (9) = Respirable fraction (2017/164/EU,

(a) = initiatable fraction (2017/104/EU), 2017/2396/EU). (9) = Respirable fraction (2017/04/EU), 2017/2398/EU), (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU), IBMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) [Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage. The other causing content of the other causing cancer and/or heritable genetic damage. = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with

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

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction. If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

should be worn. Applies only if maximum permissible exposure values are listed here. Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. EN 14042. EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

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

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection: Chemical resistant protective gloves (EN ISO 374).

Recommended

Protective nitrile gloves (EN ISO 374). Minimum layer thickness in mm:

= 0.35

Permeation time (penetration time) in minutes:

>= 480 The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time Protective hand cream recommended.

Skin protection - Other:

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

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

Thermal hazards Not applicable

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

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer

8.2.3 Environmental exposure controls No information available at present

SECTION 9: Ph	ysical and chemical	properties

9.1 Information on basic physical and chemical properties

Physical state:	Paste, liquid.
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:	Substance 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:	1,52 g/cm3 (relative density)
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	Does not apply to liquids.
9.2 Other information	
No information available at present	

SECTION 10: Stability and reactivity

10.1 Reactivity reacts with water



B) Page 5 of 14 Safety data sheet accord Revision date / version: 1			lo 1907/200	06, Annex II			Symptoms:						breathing difficulties headache
Replacing version dated Valid from: 19.10.2022 PDF print date: 19.10.20	/ version: 23	3.03.2022 / 0	0014										gastrointe tinal disturbanc s,
KNAPP PM+ KLEBER G	LUE COLL	4											dizziness, nausea
10.2 Chemical stal Stable with proper storag 10.3 Possibility of Exothermic reaction pose Alcohols	e and hand hazardo		ons				Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOEL	>5000	mg/k g		OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Hausea
Amines Bases Acids Water Developement of: Carbon dioxide							Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOEC	100	mg/m 3		OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	Dust, Mist
CO2 formation in closed Pressure increase will re 10.4 Conditions to	sult in dang						4,4'-methylenedipheny Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes
Protect from humidity. Polymerisation due to hig $T > \sim 260^{\circ}C$	gh heat is po						Acute toxicity, by oral route:	LD50	>2000	mg/k g	Rat	Regulation (EC) 440/2008 B.1 (ACUTE ORAL TOXICITY)	Analogous conclusior
10.5 Incompatible Acids Bases Amines	material	S					Acute toxicity, by dermal route:	LD50	>9400	mg/k g	Rabbit	OECD 402 (Acute Dermal Toxicity)	Analogous
Alicohols Water 10.6 Hazardous de No decomposition when			ducts				Acute toxicity, by inhalation:	LC50	0,368	mg/l/ 4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol, Does not conform with EU classificati
S	ECTIO	N 11: To	oxicolo	gical info	ormation		Acute toxicity, by inhalation:	LC50	1,5	mg/l/ 4h			n. Aerosol, Expert judgement
11.1. Information of Possibly more informatio KNAPP PM+ KLEBER O	n on health GLUE COLL	effects, see .A	Section 2.1	(classification).		Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosio n)	Skin Irrit. 2, Analogous conclusior
Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes	Respiratory or skin sensitisation:				Guinea	- 19	Yes (inhalation
Acute toxicity, by oral route: Acute toxicity, by dermal route:						n.d.a. n.d.a.	Respiratory or skin sensitisation:				pig Mouse	OECD 429 (Skin Sensitisation - Local Lymph	Skin Sens 1
Acute toxicity, by inhalation:	ATE	>20	mg/l/ 4h			Vapours, calculated value n.d.a.	Germ cell mutagenicity:				Salmonel la typhimuri	Node Assay) OECD 471 (Bacterial Reverse	Negative, Analogous conclusior
corrosion/irritation: Serious eye damage/irritation:						n.d.a.	Germ cell mutagenicity:				um Rat	Mutation Test) OECD 474 (Mammalian Erythrocyte	Negativer ale
Respiratory or skin sensitisation: Germ cell mutagenicity:						n.d.a. n.d.a.	Germ cell				Rat	Micronucleus Test) OECD 489 (In	Negativen
Carcinogenicity: Reproductive toxicity: Specific target organ toxicity - single						n.d.a. n.d.a. n.d.a.	mutagenicity: Carcinogenicity:				Rat	Vivo Mammalian Alkaline Comet Assay) OECD 453	ale Aerosol,
exposure (STOT-SE): Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.						(Combined Chronic Toxicity/Carcinog enicity Studies)	Analogous conclusior Carc. 2
Aspiration hazard: Symptoms:						n.d.a. n.d.a.	Reproductive toxicity:	NOAE L	4-12	mg/m 3	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Aerosol, Analogous conclusior
Propylene carbonate Toxicity / effect	Endpo	Value	Unit	Organis	Test method	Notes	Specific target organ toxicity - single					Toxicity Clady/	May cause respiratory
Acute toxicity, by oral route:	LD50	>5000	mg/k g	m Rat	OECD 401 (Acute Oral		exposure (STOT-SE), inhalative: Specific target organ	LOAE	1		Rat	OECD 453	Aerosol,
Acute toxicity, by dermal route:	LD50	>2000	mg/k g	Rabbit	Toxicity) OECD 402 (Acute Dermal Toxicity)		toxicity - repeated exposure (STOT-RE), inhalat.:	LOAE	1	mg/m 3	Ndi	(Combined Chronic Toxicity/Carcinog	Analogous conclusior Target
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosio	Not irritant	Specific target organ	NOAE	0,2	mg/m	Rat	enicity Studies) OECD 453	organ(s): respiratory system Aerosol,
Serious eye damage/irritation:				Rabbit	n) OECD 405 (Acute Eye Irritation/Corrosio n)	Irritant	toxicity - repeated exposure (STOT-RE), inhalat.:	L		3		(Combined Chronic Toxicity/Carcinog enicity Studies)	Analogous conclusior Target organ(s): respiratory
Respiratory or skin sensitisation:				Human being	0500 (7)	No (skin contact)							system
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative	o-(p-isocyanatobenzyl) Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes
Germ cell mutagenicity:					OECD 474 (Mammalian Erythrocyte Micronucleus	Negative	Acute toxicity, by oral route:	LD50	>2000	mg/k g mg/k	Rat	Regulation (EC) 440/2008 B.1 (ACUTE ORAL TOXICITY) OECD 402	Analogous conclusior Analogous
Germ cell mutagenicity:					Test) OECD 482 (Gen. Tox	Negative	Acute toxicity, by dermal route:	LD50	0,387	g mg/l/	Rabbit	(Acute Dermal Toxicity)	Analogous conclusior Aerosol,
					DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)		inhalation:			4h			Does not conform with EU classificati n.
				Mouse	OECD 451 (Carcinogenicity Studies)	Negative	Acute toxicity, by inhalation:	ATE	1,5	mg/l/ 4h	Rabbit	OECD 404	Aerosol, Expert judgement Skin Irrit.
					OECD 414	Negative			1	1	TIQUE/T		
Carcinogenicity: Reproductive toxicity:	NOAE L	1000	g mg/k	Rat	(Prenatal Developmental Toxicity Study)	rioganio	corrosion/irritation:					(Acute Dermal Irritation/Corrosio n)	2, Analogous conclusior



Valid from: 19.10.2022 PDF print date: 19.10.20 KNAPP PM+ KLEBER G		4				
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosio n)	Not irritant, Analogous conclusion, Does not conform with EU classificatio
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	n. No (skin contact), Analogous conclusion
Respiratory or skin sensitisation:				Guinea pig		Yes (inhalation), Analogous conclusion
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact), Analogous conclusion
Germ cell mutagenicity:				Salmonel la typhimuri um	OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Rat	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative, Analogous conclusion male
Carcinogenicity:				Rat	OECD 453 (Combined Chronic Toxicity/Carcinog enicity Studies)	Aerosol, Analogous conclusion, Carc. 2
Reproductive toxicity:	NOAE L	4-12	mg/k g	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Aerosol, Analogous conclusion
Symptoms:						mucous membrane irritation, breathing difficulties, coughing, asthmatic symptoms
Specific target organ toxicity - repeated exposure (STOT-RE), nhalat.:	NOAE L	0,2	mg/m 3	Rat	OECD 453 (Combined Chronic Toxicity/Carcinog enicity Studies)	Aerosol, Analogous conclusion, Target organ(s): respiratory system
Specific target organ toxicity - repeated exposure (STOT-RE), nhalat.:	LOAE L	1	mg/m 3	Rat	OECD 453 (Combined Chronic Toxicity/Carcinog enicity Studies)	Aerosol, Analogous conclusion, Target organ(s): respiratory system
Diphenylmethanediisoo Toxicity / effect	cyanate, iso Endpo	meres and Value	homologue Unit		Test method	Notes
Acute toxicity, by oral	int LD50	>5000	mg/k	Organis m Rat	OECD 401	Notes
route: Acute toxicity, by dermal route:	LD50	>5000	g mg/k g	Rabbit	(Acute Oral Toxicity) OECD 402 (Acute Dermal	
Acute toxicity, by nhalation:	LC50	0,31- 0,49	mg/l/ 4h	Rat	Toxicity) OECD 403 (Acute Inhalation Toxicity)	Aerosol, Does not conform with EU classificatio n.
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosio n)	Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosio n)	Eye Irrit. 2
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact), Analogous conclusion
Respiratory or skin sensitisation: Respiratory or skin sensitisation:				Guinea pig Rat	OECD 406 (Skin Sensitisation)	Yes (skin contact) Yes (inhalation)
Germ cell mutagenicity:				Rat	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	(Innalation) Negative, Analogous conclusion
Germ cell mutagenicity:				Salmonel la typhimuri um	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:	NOAE L	4	mg/m 3	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Aerosol, Negative

Coroipogonicity		1	1	Rat	OECD 453	Aerosol,
Carcinogenicity:				Nai	(Combined	Limited
					Chronic Toxicity/Carcinog	evidence of a
					enicity Studies)	carcinogen c effect.
Specific target organ						Target
toxicity - single exposure (STOT-SE),						organ(s): respiratory
inhalative:						system, May cause
						respiratory
Specific target organ						irritation. Target
toxicity - repeated						organ(s):
exposure (STOT-RE), inhalat.:						respiratory system
Symptoms:						breathing difficulties
Specific target organ	LOAE	1	mg/m	Rat	OECD 453	Aerosol,
toxicity - repeated exposure (STOT-RE),	L		3		(Combined Chronic	Analogous conclusion
inhalat.:					Toxicity/Carcinog enicity Studies)	
Specific target organ	NOAE	0,2	mg/m	Rat	OECD 453	Aerosol,
toxicity - repeated exposure (STOT-RE),	L		3		(Combined Chronic	Analogous conclusion
inhalat.:					Toxicity/Carcinog enicity Studies)	
- 1/			0(
Titanium dioxide (in po μm) Taxiaitu / offaat				-	Test method	
Toxicity / effect	Endpo int	Value	Unit	Organis m		Notes
Acute toxicity, by oral route:	LD50	>5000	mg/k g	Rat	OECD 425 (Acute Oral	
					Toxicity - Up- and-Down	
					and-Down Procedure)	
Acute toxicity, by dermal route:	LD50	>5000	mg/k g	Rabbit		
Acute toxicity, by	LC50	>6,8	mg/l/	Rat		
nhalation: Skin			4h	Rabbit	OECD 404	Not irritant
corrosion/irritation:					(Acute Dermal Irritation/Corrosio	
Serious eye				Rabbit	n) OECD 405	Not irritant,
damage/irritation:				Rabbit	(Acute Eye	Mechanica
					Irritation/Corrosio n)	irritation possible.
Respiratory or skin				Mouse	OECD 429 (Skin	Not
sensitisation:					Sensitisation - Local Lymph	sensitizisin g
Respiratory or skin				Guinea	Node Assay) OECD 406 (Skin	No (skin
sensitisation:				pig	Sensitisation)	contact)
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian	Negative
0,					Èrythrocyte Micronucleus	
Germ cell				Mammali	Test) OECD 473 (In	Negative
mutagenicity:				an	Vitro	negative
					Mammalian Chromosome	
Germ cell				Salmonel	Aberration Test) (Ames-Test)	Negative
mutagenicity:				la	(/1103 1030)	negative
				typhimuri um		
Germ cell mutagenicity:					OECD 476 (In Vitro	Negative
mutagenicity.					Mammalian Cell	
					Gene Mutation Test)	
Germ cell					OECD 471	Negative
mutagenicity:					(Bacterial Reverse	
Reproductive toxicity				Rat	Mutation Test) OECD 414	No
(Developmental				i tat	(Prenatal	indications
oxicity):					Developmental Toxicity Study)	of such an effect.
Specific target organ oxicity - single						Not irritant (respiratory
exposure (STOT-SE):						tract).
Symptoms:						mucous membrane
						irritation, coughing,
						respiratory
						distress, drying of
Specific target organ	NOAE	3500	mg/k	Rat		the skin. 90d
opeonio larget organ	L	3300	g/d	rtai		900
exposure (STOT-RE), oral:		10	mg/m 3	Rat		90d
exposure (STOT-RE), oral: Specific target organ	NOAE		3			
exposure (STOT-RE), oral: Specific target organ toxicity - repeated exposure (STOT-RE),	NOAE C		1			
exposure (STOT-RE), oral: Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	С					
exposure (STOT-RE), oral: Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: 2,2'-methylenediphenyl	C diisocyana Endpo	ate Value	Unit	Organis	Test method	Notes
exposure (STOT-RE), oral: Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: 2,2'-methylenediphenyl Toxicity / effect	C diisocyana Endpo int	Value		m		
exposure (STOT-RE), oral: Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.: 2,2'-methylenediphenyl Toxicity / effect Acute toxicity, by oral	C diisocyana Endpo		Unit mg/k g		Regulation (EC) 440/2008 B.1	Notes Analogous conclusion
exposure (STOT-RE), oral: Specific target organ toxicity - repeated exposure (STOT-RE), inhalat:: 2,2'-methylenediphenyl Toxicity / effect Acute toxicity, by oral route:	C diisocyana Endpo int LD50	Value >2000	mg/k g	m Rat	Regulation (EC) 440/2008 B.1 (ACUTE ORAL TOXICITY)	Analogous conclusion
toxicity - repeated exposure (STOT-RE), oral: Specific target organ toxicity - repeated exposure (STOT-RE), inhalat: 2,2'-methylenediphenyl Toxicity / effect Acute toxicity, by oral route: Acute toxicity, by dermal mute:	C diisocyana Endpo int	Value	mg/k g mg/k	m	Regulation (EC) 440/2008 B.1 (ACUTE ORAL TOXICITY) OECD 402	Analogous conclusion Analogous
exposure (STOT-RE), oral: Specific target organ toxicity - repeated exposure (STOT-RE), inhalat:: 2,2'-methylenediphenyl Toxicity / effect Acute toxicity, by oral route:	C diisocyana Endpo int LD50	Value >2000	mg/k g	m Rat	Regulation (EC) 440/2008 B.1 (ACUTE ORAL TOXICITY)	Analogous conclusion



					Test)		Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes
5 9					Erythrocyte Micronucleus		Calcium carbonate			1		.	
sensitisation: Germ cell nutagenicity:				pig Rat	OECD 474 (Mammalian	(inhalation) Negative	exposure (STOT-SE), inhalative:						respirator tract, Irritant
Respiratory or skin				Guinea	Node Assay)	conclusion Yes	Specific target organ toxicity - single						Target organ(s):
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph	Yes (skin contact), Analogous							mucous membran irritation
damage/irritation:					(Acute Eye Irritation/Corrosio n)	Analogous conclusion	Symptoms:					Toxicity Study)	asthmatic symptoms
Serious eye				Rabbit	n) OECD 405	Irritant,	Reproductive toxicity:					OECD 414 (Prenatal Developmental	Negative
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosio	n. Irritant, Analogous conclusion	Penroduotivo tevicitur					enicity Studies)	of a carcinoge c effect.
nhalation:			4h		(Acute Inhalation Toxicity)	conform with EU classificatio						(Combined Chronic Toxicity/Carcinog	conclusio Limited evidence
nhalation: Acute toxicity, by	LC50	0,368	4h mg/l/	Rat	(Acute Inhalation Toxicity) OECD 403	Does not	Carcinogenicity:					Reverse Mutation Test) OECD 453	conclusio Analogou
dermal route: Acute toxicity, by	LC50	>2,24	g mg/l/	Rat	(Acute Dermal Toxicity) OECD 403	Aerosol	Germ cell mutagenicity:					OECD 471 (Bacterial	Conclusion Negative Analogou
Acute toxicity, by	LD50	>9400	mg/k	Rabbit	(ACUTE ORAL TOXICITY) OECD 402		Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Yes (inhalatio Analogo
Acute toxicity, by oral oute:	LD50	>2000	g mg/k g	Rat	Toxicity) Regulation (EC) 440/2008 B.1		acrianadiiUH.					Local Lymph Node Assay)	(skin contact), Analogou conclusio
Acute toxicity, by oral route:	int LD50	>10000	mg/k g	m Rat	OECD 401 (Acute Oral		Respiratory or skin sensitisation:				Mouse	n) OECD 429 (Skin Sensitisation -	Sensitisin
1,4'-methylenediphenyl Foxicity / effect	diisocyana Endpo	ite Value	Unit	Organis	Test method	Notes	Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosio	Irritant, Analogou conclusio
					enicity Studies)	Analogous conclusion	inhalation:			4h			conform with EU classificat n.
Specific target organ oxicity - repeated exposure (STOT-RE), nhalat.:	LOAE	1	mg/m 3	Rat	OECD 453 (Combined Chronic Toxicity/Carcinog	Aerosol, Target organ(s): respiratory	dermal route: Acute toxicity, by	LC50	0,387	g mg/l/	Rat	(Acute Dermal Toxicity)	conclusio Does not
Providio torget	LOAE	1	page-	Ret	enicity Studies) OECD 453	system, Analogous conclusion	Acute toxicity, by	LD50	>9400	mg/k	Rabbit	(ACUTE ORAL TOXICITY) OECD 402	Analogou
oxicity - repeated exposure (STOT-RE), nhalat.:	L		3		(Combined Chronic Toxicity/Carcinog	Target organ(s): respiratory	Acute toxicity, by oral route:	int LD50	>2000	mg/k g	m Rat	Regulation (EC) 440/2008 B.1	Analogou conclusio
Specific target organ	NOAE	0,2	mg/m	Rat	OECD 453	irritation Aerosol,	o-(p-isocyanatobenzyl) Toxicity / effect	Endpo	yanate Value	Unit	Organis	Test method	Notes
						coughing, mucous membrane	Aspiration hazard:					Mutation Test)	No
Symptoms:						conclusion respiratory distress,	Germ cell mutagenicity:					OECD 471 (Bacterial Reverse	Negative
					Developmental Toxicity Study)	of such an effect., Aerosol, Analogous	Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosio n)	Not irritar
Reproductive toxicity:	NOAE L	4-12	mg/m 3	Rat	enicity Studies) OECD 414 (Prenatal	No indications	corrosion/irritation:				Detter	(Acute Dermal Irritation/Corrosio n)	NI-41 11
					(Combined Chronic Toxicity/Carcinog	conclusion, Aerosol, Carc. 2	dermal route:			g	Rabbit	(Acute Dermal Toxicity) OECD 404	Not irritar
Carcinogenicity:				Rat	Micronucleus Test) OECD 453	Analogous	Acute toxicity, by	LD50	> 2000	mg/k	Rat	Toxic Class Method) OECD 402	
Germ cell nutagenicity:				Rat	OECD 474 (Mammalian Erythrocyte	Negative, Analogous conclusion	Acute toxicity, by oral route:	LD50	>5000	mg/k g	Rat	OECD 423 (Acute Oral Toxicity - Acute	
ugornotty.				typhimuri um	Reverse Mutation Test)		Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes
Germ cell nutagenicity:				Salmonel	Local Lymph Node Assay) OECD 471 (Bacterial	Negative	Silicon dioxide						respirator system
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation -	conclusion Yes (skin contact)	inhalative:						tract, Target organ(s):
Respiratory or skin sensitisation:				Guinea pig	n)	Yes (inhalation), Analogous	inhalative: Specific target organ toxicity - single exposure (STOT-SE),						tract Irritation of the respirator
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosio	Slightly irritant	Specific target organ toxicity - single exposure (STOT-SE), inholotive:						Irritation of the respirator
corrosion/irritation:					(Acute Dermal Irritation/Corrosio n)								mucous membrar irritation
Acute toxicity, by nhalation: Skin		1,5	mg/l	Rabbit	OECD 404	Expert judgement Skin Irrit. 2	Symptoms:						c effect. respirato distress, coughing
Aguta taviaity, by	ATE	1.5				with EU classificatio n. Aerosol,						Toxicity/Carcinog enicity Studies)	evidence of a carcinoge
Acute toxicity, by nhalation:	LC50	0,527	mg/l/ 4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol, Does not conform	Carcinogenicity:					Toxicity Study) OECD 453 (Combined Chronic	Analogou conclusio Limited
PDF print date: 19.10.2022 NAPP PM+ KLEBER G	22 LUE COLLA	4					Reproductive toxicity:	L	4	mg/m 3	Rai	(Prenatal Developmental	Negative, Analogou conclusio
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PDF print date: 19.10.20			0014			
KNAPP PM+ KLEBER (SLUE COLL	А				
Acute toxicity, by oral	LD50	>2000	mg/k	Rat	OECD 420	
route:			g		(Acute Oral	
					toxicity - Fixe	
					Dose Procedure)	
Acute toxicity, by oral	LD50	> 5000	mg/k	Rat		
route:			g			
Acute toxicity, by	LD50	>2000	mg/k	Rat	OECD 402	
dermal route:			g		(Acute Dermal	
		-		-	Toxicity)	
Acute toxicity, by inhalation:	LC50	>3	mg/l/	Rat	OECD 403	
Innalation:			4h		(Acute Inhalation Toxicity)	
Skin				Rabbit	OECD 404	Not irrita
corrosion/irritation:				Rabbit	(Acute Dermal	NOLINIA
oonoolon maalon.					Irritation/Corrosio	
					n)	
Serious eye				Rabbit	ÓECD 405	Not irrita
damage/irritation:					(Acute Eye	Mechani
					Irritation/Corrosio	irritation
					n)	possible
Respiratory or skin						No (skin
sensitisation:						contact)
Germ cell					in vitro	Negative
mutagenicity:						Negativ
Carcinogenicity:						Negative
						d as Ca-
						lactate
Reproductive toxicity:						Negative
reproductive toxicity.		1				administ
						d as Ca-
	1	1				

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.

11.2. Information on other hazards

KNAPP PM+ KLEBER G	SLUE COLL	.A				
Toxicity / effect	Endpo	Value	Unit	Organis	Test method	Notes
	int			m		
Endocrine disrupting						Does not
properties:						apply to
						mixtures.
Other information:						No other
						relevant
						information
						available
						on adverse
						effects on
						health.

SECTION 12: Ecological information

Diphenylmethanediisoo					Toot mothod	Notos	Possibly more infor			arenecis	see Seci		auon).	
Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes	KNAPP PM+ KLEI Toxicity / effect	BER GLUE CO Endpoin	OLLA Tim	Valu	Unit	Organism	Test	Notes
Acute toxicity, by oral route:	LD50	>10000	mg/k g	Rat	OECD 401 (Acute Oral			t	e	e	•	organioni	method	
					Toxicity)		12.1. Toxicity to fish:							n.d.a.
Acute toxicity, by dermal route:	LD50	>9400	mg/k g	Rabbit	OECD 402 (Acute Dermal		12.1. Toxicity to daphnia:							n.d.a.
Acute toxicity, by	LC50	0,49	mg/l/	Rat	Toxicity) OECD 403	Aerosol,	12.1. Toxicity to							n.d.a.
inhalation:	LC50	0,49	4h		(Acute Inhalation Toxicity)	Does not conform with EU classificatio n.	algae: 12.2. Persistence and degradability:							With wa at the interface transfor slowly w
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosio n)	Skin Irrit. 2								formation of CO2 into a fir insoluble
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosio n)	Mild irritant								reaction product with a h melting
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Yes (skin contact)								point (polycar
Respiratory or skin sensitisation:				Rat		Yes (inhalation)								mide).
Germ cell mutagenicity:				Salmonel la	Regulation (EC) 440/2008	Analogous conclusion,								to
mutagenicity.				typhimuri um	B.13/B.14 (REVERSE MUTATION TEST USING BACTERIA)	Negative								experier available to date, polycart ide is ine and non
Germ cell mutagenicity:				Rat	OECD 474 (Mammalian	Negative, Analogous								degrada
matagemeny.					Erythrocyte Micronucleus Test)	conclusion	12.3. Bioaccumulative potential:							n.d.a.
Carcinogenicity:		1	mg/m 3	Rat	OECD 453 (Combined	Positive	12.4. Mobility in soil:							n.d.a.
					Chronic Toxicity/Carcinog enicity Studies)		12.5. Results of PBT and vPvB assessment							n.d.a.
Reproductive toxicity (Developmental toxicity):		4	mg/m 3	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative	12.6. Endocrine disrupting properties: 12.7. Other							Does no apply to mixtures No
Reproductive toxicity (Effects on fertility):				Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative	adverse effects:							informat availab on other adverse
Reproductive toxicity:	NOAE L	12	mg/m 3	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Aerosol								effects of the environi t.
Specific target organ toxicity - single exposure (STOT-SE):						Irritation of the respiratory tract	Other information:							DOC- eliminat degree(mplexin
Specific target organ oxicity - repeated exposure (STOT-RE):	NOEC	0,2	mg/k g		OECD 453 (Combined Chronic Toxicity/Carcinog enicity Studies)									organic substan >= 80%/28 No
Aspiration hazard:						No	Other information:	AOX		0	%			Accordi to the
														recipe, contains no AOX
							Propylene carbon	ato						
							Toxicity / effect	Endpoin	Tim	Valu	Unit	Organism	Test method	Notes
							12.1. Toxicity to	t LC50	e 96h	e >10	mg/l	Cyprinus	92/69/EC	
							fish:	1	1	00		caprio	1	1



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12.1. Toxicity to daphnia:	EC50	48h	>10 00	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisati									slowly with formation of CO2 into a firm, insoluble
12.1. Toxicity to algae:	EC50	72h	>90 0	mg/l	Desmodesm us subspicatus	on Test) OECD 201 (Alga, Growth Inhibition									reaction product with a high melting point
12.2. Persistence and degradability:			83,5 -87- 7	%		Test) OECD 301 B (Ready Biodegradab ility - Co2 Evolution Test)	Readily biodegrada ble29d								(polycarba mide)., According to experience available to date,
12.2. Persistence and degradability:	DOC	14d	90- 100	%		OECD 301 A (Ready Biodegradab ility - DOC Die-Away Test)									polycarban ide is inert and non- degradable ., Analogous
12.3. Bioaccumulative potential:	Log Pow		- 0,48				Bioaccumul ation is unlikely (LogPow < 1).,	12.1. Toxicity to daphnia:	EC50	24h	>10 00	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute	conclusion Analogous conclusion
12.5. Results of PBT and vPvB assessment							calculated value No PBT substance, No vPvB substance	12.1. Toxicity to daphnia:	NOEC/N OEL	21d	>10	mg/l	Daphnia magna	Immobilisati on Test) OECD 202 (Daphnia sp. Acute Immobilisati	Analogous conclusion
Toxicity to bacteria: Other information:	EC10 AOX	16h	740 0 0	mg/l %	Pseudomon as putida	DIN 38412 T.8	Does not contain any organically bound halogens which can	12.3. Bioaccumulative potential:	Log Pow		5,22			on Test)	A notable biological accumulati on potential has to be expected (LogPow >
							contribute to the AOX value in waste water.	12.1. Toxicity to algae:	ErC50	72h	>16 40	mg/l	Desmodesm us subspicatus	OECD 201 (Alga, Growth Inhibition	3). Analogous conclusion
4,4'-methylenedip Toxicity / effect Other	henyl diisocy Endpoin t	anate Tim e	Valu e	Unit	Organism	Test method	Notes According	12.3. Bioaccumulative potential:	BCF	28d	200		Cyprinus caprio	Test) IUCLID Chem. Data Sheet (ESIS)	Not to be expected
information:							to experience available to date,	12.5. Results of PBT and vPvB assessment						(200)	No PBT substance, No vPvB substance
							polycarbam ide is inert and non- degradable ., With water at the interface, transforms slowly with formation	Other information:	AOX						Does not contain any organically bound halogens which can contribute to the AOX value in waste water.
12.4. Mobility in	Н		0,02	Pa*m			of CO2 into a firm, insoluble reaction product with a high melting point (polycarba mide).	Toxicity to bacteria:	EC50	3h	>10 0	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	Analogous conclusion
12.4. Mobility in soil: 12.1. Toxicity to fish:	H (Henry) LC50	96h	0,02 29 >10 00	Pa*m 3/mol mg/I	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	into a firm, insoluble reaction product with a high melting point (polycarba		EC50 NOEC/N OEL	3h 14d		mg/l mg/k g		(Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) OECD 208 (Terrestrial Plants, Growth	Analogous conclusion
soil: 12.1. Toxicity to	(Henry)	96h	29 >10	3/mol		(Fish, Acute	into a firm, insoluble reaction product with a high melting point (polycarba mide).	bacteria:	NOEC/N		0	mg/k	sludge Lactuca	(Activated Sludge, Respiration Inhibition Test (Carbon and Oxidation)) OECD 208 (Terrestrial Plants, Growth Test) OECD 208 (Terrestrial Plants, Growth	Analogous conclusion Analogous
soil: 12.1. Toxicity to	(Henry)	96h	29 >10	3/mol		(Fish, Acute Toxicity	into a firm, insoluble reaction product with a high melting point (polycarba mide).	bacteria: Other organisms:	NOEC/N OEL NOEC/N	14d	0 >10 00 >10	mg/k g mg/k	sludge Lactuca sativa	(Activated Sludge, Respiration Inhibition Test (Carbon and Occost OECD 208 (Terrestrial Plants, Growth Test) OECD 207 (Terrestrial Plants, Growth Test) OECD 207 (Terrestrial DeCD 207 (Terrestrial	Analogous conclusion Analogous conclusion Analogous Analogous
soil: 12.1. Toxicity to	(Henry)	96h	29 >10	3/mol		(Fish, Acute Toxicity	into a firm, insoluble reaction product with a high melting point (polycarba mide).	Dacteria: Other organisms: Other organisms: Toxicity to	NOEC/N OEL NOEC/N OEL	14d 14d	0 >10 00 >10 00	mg/k g mg/k g mg/k	Lactuca sativa	(Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) OECD 208 (Terrestrial Plants, Growth Test) OECD 208 (Terrestrial Plants, Growth Test) OECD 208 (Terrestrial Plants, Growth Test) OECD 207 (Earthworm, Acute	Analogous conclusion Analogous conclusion Analogous
soil: 12.1. Toxicity to	(Henry)	96h	29 >10	3/mol		(Fish, Acute Toxicity	into a firm, insoluble reaction product with a high melting point (polycarba mide).	Dacteria: Other organisms: Other organisms: Toxicity to annelids: Toxicity to	NOEC/N OEL NOEC/N OEL NOEC/N OEL EC50	14d 14d 14d	0 >10 00 >10 00 >100 0 0 >100 0 0 0 0 0 0 0 0 0 0 0 0	mg/k g mg/k g mg/k	Lactuca sativa Avena sativa Lumbricus terrestris Eisenia	(Activated Sludge, Respiration Inhibition Test (Carbon and OECD 208 (Terrestrial Plants, Growth Test) OECD 208 (Terrestrial Plants, Growth Test) OECD 208 (Terrestrial Plants, Growth Test) OECD 207 (Earthworm, Acute Toxicity Tests) OECD 207 (Earthworm, Acute Toxicity Toxicity	Analogous conclusion Analogous conclusion Analogous conclusion Analogous
soil: 12.1. Toxicity to	(Henry)	96h	29 >10	3/mol		(Fish, Acute Toxicity	into a firm, insoluble reaction product with a high melting point (polycarba mide).	Dacteria: Other organisms: Other organisms: Toxicity to annelids: Toxicity to annelids:	NOEC/N OEL NOEC/N OEL NOEC/N OEL EC50	14d 14d 14d	0 >10 00 >10 00 >100 0 0 >100 0 0 0 0 0 0 0 0 0 0 0 0	mg/k g mg/k g mg/k	Lactuca sativa Avena sativa Lumbricus terrestris Eisenia	(Activated Sludge, Respiration Inhibition Test (Carbon and OECD 208 (Terrestrial Plants, Growth Test) OECD 208 (Terrestrial Plants, Growth Test) OECD 208 (Terrestrial Plants, Growth Test) OECD 207 (Earthworm, Acute Toxicity Tests) OECD 207 (Earthworm, Acute Toxicity Toxicity	Analogous conclusion Analogous conclusion Analogous conclusion Analogous



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12.1. Toxicity to daphnia: 12.1. Toxicity to daphnia:	EC50 NOEC/N OEL	24h 21d	>10 00 >10	mg/l mg/l	Daphnia magna Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisati on Test) OECD 202 (Daphnia sp. Acute	Analogous conclusion Analogous conclusion								polycarba ide is iner and non- degradabl ., With water at the interface,
12.1. Toxicity to algae:	ErC50	72h	>16 40	mg/l	Scenedesm us subspicatus	Immobilisati on Test) OECD 201 (Alga, Growth Inhibition	Analogous conclusion								transform slowly wit formation of CO2 into a firm insoluble
12.2. Persistence and degradability:		28d	0	%		Test) OECD 302 C (Inherent Biodegradab ility - Modified MITI Test	Not biodegrada ble, Analogous conclusion, According								reaction product with a hig melting point (polycarba mide).
						(II))	to experience available to date, polycarbam	12.3. Bioaccumulative potential:	BCF	42d	<14		Cyprinus carpio	OECD 305 (Bioconcentr ation - Flow- Through Fish Test)	Not to be expected
							ide is inert and non- degradable ., With	12.5. Results of PBT and vPvB assessment							No vPvB substance No PBT substance
							water at the interface, transforms slowly with formation of CO2 into a firm, insoluble	Toxicity to bacteria:	EC50	3h	>10 0	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium	
							reaction product with a high melting point (polycarba	Other organisms:	NOEC/N OEL	14d	>10 00	mg/k g	Lactuca sativa	Oxidation)) OECD 208 (Terrestrial Plants, Growth Test)	
12.3. Bioaccumulative potential:	BCF	28d	200		Cyprinus caprio	OECD 305 (Bioconcentr ation - Flow- Through Fish Test)	midé). Not to be expected, Analogous conclusion	Toxicity to annelids:	NOEC/N OEL	14d	>10 00	mg/k g	Lumbricus terrestris	OECD 207 (Earthworm, Acute Toxicity Tests)	
12.4. Mobility in soil:	H (Henry)		0,02 29	Pa*m 3/mol		FISH Test)		Titanium dioxide (µm)	(in powder fo	rm conta	ining 1 %	% or more	of particles with	aerodynamic di	ameter <= 10
12.5. Results of PBT and vPvB							No PBT substance,	Toxicity / effect	Endpoin t	Tim e	Valu e	Unit	Organism	Test method	Notes
Toxicity to bacteria:	EC50	3h	>10 0	mg/l	activated sludge	OECD 209 (Activated	No vPvB substance Analogous conclusion	12.1. Toxicity to fish:	LC50	96h	>10 0	mg/l	Oncorhynch us mykiss	OECD 203 (Fish, Acute Toxicity Test)	
bacteria.					Sludge	Sludge, Respiration Inhibition Test (Carbon	Conclusion	12.1. Toxicity to daphnia:	LC50	48h	>10 0	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisati on Test)	
Other organisms:	NOEC/N	14d	>10		Avena activa	and Ammonium Oxidation)) OECD 208	Analogous	12.1. Toxicity to algae:	EC50	72h	16	mg/l	Pseudokirch neriella subcapitata	U.S. EPA- 600/9-78- 018	
Other organisms:	OEL NOEC/N	140	>10 00	mg/k g mg/k	Avena sativa	(Terrestrial Plants, Growth Test) OECD 208	Analogous	12.2. Persistence and degradability:							Not relevant for inorganic substance
other organisms.	OEL	140	00	g	sativa	(Terrestrial Plants, Growth	conclusion	12.3. Bioaccumulative potential:	BCF	42d	9,6				Not to be expected
Toxicity to annelids:	NOEC/N OEL	14d	>10 00	mg/k g	Eisenia foetida	Test) OECD 207 (Earthworm,	Analogous conclusion	12.3. Bioaccumulative potential:	BCF	14d	19- 352				Oncorhyn hus mykis
						Acute Toxicity Tests)		12.4. Mobility in soil: 12.5. Results of PBT and vPvB							Negative No PBT substance
Diphenylmethane Toxicity / effect	diisocyanate Endpoin	, isomere Tim	es and ho Valu	omologue: Unit	s Organism	Test	Notes	assessment							No vPvB substance
Other organisms:	t NOEC/N	e 14d	e >10	mg/k	Avena sativa	method OECD 208		Toxicity to bacteria:			>50 00	mg/l	Escherichia coli		
organionio.	OEL		00	g		(Terrestrial Plants, Growth		Toxicity to bacteria:	LC0	24h	>10 000	mg/l	Pseudomon as fluorescens		
12.1. Toxicity to fish:	LC0	96h	>10 00	mg/l	Brachydanio rerio	Test) OECD 203 (Fish, Acute		Toxicity to annelids: Water solubility:	NOEC/N OEL		>10 00	mg/k g	Eisenia foetida		Insoluble2
12.1. Toxicity to	NOEC/N	21d	>=1	mg/l	Daphnia	Toxicity Test) OECD 211		2,2'-methylenedip	honyl dilee	anata	1	1			°C
daphnia:	OEL	210	0		magna	(Daphnia magna Reproductio		Toxicity / effect 12.5. Results of	Endpoin t	Tim e	Valu e	Unit	Organism	Test method	Notes No PBT
12.1. Toxicity to daphnia:	EC50	24h	>10 00	mg/l	Daphnia magna	n Test) OECD 202 (Daphnia sp. Acute Immobilisati		PBT and vPvB assessment 12.4. Mobility in soil:	H (Henry)		0,02 29	Pa*m 3/mol			substance No vPvB substance
12.1. Toxicity to algae:	ErC50	72h	>16 40	mg/l	Scenedesm us subspicatus	on Test) OECD 201 (Alga, Growth Inhibition		12.1. Toxicity to fish:	LC50	96h	>10 00	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion



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PDF print date: 19. KNAPP PM+ KLEB		DLLA						Persistence and		280	0	%	sludge	C (Inherent	at the
12.1. Toxicity to daphnia:	NOEC/N OEL	21d	>10	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisati on Test)	Analogous conclusion	degradability:						Biodegradab ility - Modified MITI Test (II))	interface, transform slowly wit formation of CO2 into a firm
12.1. Toxicity to daphnia:	EC50	24h	>10 00	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisati on Test)	Analogous conclusion								insoluble reaction product with a hig melting
12.1. Toxicity to algae:	EC50	72h	>16 40	mg/l	Scenedesm us subspicatus	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion								point (polycart mide)., Accordin to
12.2. Persistence and degradability:		28d	0	%	activated sludge	OECD 302 C (Inherent Biodegradab ility - Modified MITI Test (II))	With water at the interface, transforms slowly with formation of CO2 into a firm,								experien available to date, polycarb ide is ine and non- degradal
							insoluble reaction product with a high melting point (polycarba mide)., According to experience available to date, polycarbam ide is inert and non- degradable Analogous conclusion	12.2. Persistence and degradability:	BOD	28d	0	%		OECD 302 C (Inherent Biodegradab ility - Modified MITI Test (II))	With watt at the interface, transform slowly wit formation of CO2 into a firm insoluble reaction product with a hig melting point (polycarb mide)., Accordin, to experienc available
12.3. Bioaccumulative potential:	Log Pow		5,22				A notable biological accumulati on potential								to date, polycarba ide is ine and non- degradat
12.3.	BCF	28d	200		Cyprinus	OECD 305	has to be expected (LogPow > 3). Not to be	12.3. Bioaccumulative potential:	BCF	28d	200		Cyprinus caprio	OECD 305 (Bioconcentr ation - Flow- Through Fish Test)	A notable biologica accumul on potential
Bioaccumulative potential:		200			caprio	(Bioconcentr ation - Flow- Through Fish Test)	expected, Analogous conclusion							,	has to be expected (LogPow 3).
Toxicity to bacteria:	EC50	3h	>10 0	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium	Analogous conclusion	12.3. Bioaccumulative potential:	Log Pow		4,51 -5,2 2			OECD 117 (Partition Coefficient (n- octanol/wate r) - HPLC method)	A notable biologica accumula on potential has to be expected (LogPow 3).
Other organisms:	NOEC/N OEL	14d	>10 00	mg/k g	Avena sativa	Oxidation)) OECD 208 (Terrestrial Plants,	Analogous conclusion	12.5. Results of PBT and vPvB assessment							No PBT substand No vPvB substand
Other organisms:	NOEC/N OEL	14d	>10 00	mg/k g	Lactuca sativa	Growth Test) OECD 208 (Terrestrial Plants, Growth Test)	Analogous conclusion	Toxicity to bacteria:	EC50	3h	>10 0	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test	
Toxicity to annelids:	NOEC/N OEL	14d	>10 00	mg/k g	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity	Analogous conclusion	Toxicity to	EC50	3h	>10	mg/l	activated	(Carbon and Ammonium Oxidation)) OECD 209	Analogou
						Tests)		bacteria:			0		sludge	(Activated Sludge,	conclusio
4,4'-methylenedip Toxicity / effect	Endpoin t	Tim e	Valu e	Unit	Organism	Test method	Notes							Respiration Inhibition Test	
12.1. Toxicity to fish:	LC50	96h	>10 00	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)		0.1.1						(Carbon and Ammonium Oxidation))	
12.1. Toxicity to fish:	LC0	96h	>10 00	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test) OECD 202	Analogous conclusion	Other information:							Does no contain any organica bound
12.1. Toxicity to daphnia: 12.1. Toxicity to algae:	EC50 EC50	24h 72h	>10 00 1,5	mg/l mg/l	Daphnia magna	(Daphnia sp. Acute Immobilisati on Test) OECD 201 (Alga,	Analogous conclusion								halogen: which ca contribut to the A0 value in waste
12.1. Toxicity to algae:	EC50	72h	164 0	mg/l	Desmodesm us subspicatus	Growth Inhibition Test) OECD 201 (Alga, Growth	Analogous conclusion	Toxicity to annelids:	EC50	14d	>= 100 0	mg/k g	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	water.
					occopicatuo	Inhibition Test)		Silicon dioxide							·



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Valid from: 19.10.2 PDF print date: 19. KNAPP PM+ KLEE	10.2022	OLLA						12.1. Toxicity to daphnia:	EC50	48h	>10 0	mg/l	Daphnia magna	Tests) OECD 202 (Daphnia	
Toxicity / effect	Endpoin	Tim	Valu	Unit	Organism	Test	Notes							sp. Acute Immobilisati	
12.1. Toxicity to fish:	t EC0	e 96h	e >10 000	mg/l	Brachydanio rerio	method OECD 203 (Fish, Acute Toxicity		12.1. Toxicity to fish:	LC50	96h	>10 0	mg/l	Oncorhynch us mykiss	on Test) OECD 203 (Fish, Acute Toxicity	
12.1. Toxicity to	EC0	24h	>10	mg/l	Daphnia	Test) OECD 202		12.1. Toxicity to	LC50	96h	>10	mg/l	Oncorhynch	Test)	
daphnia:			00		magna	(Daphnia sp. Acute		fish: 12.1. Toxicity to	EC50	48h	>10	mg/l	us mykiss Daphnia		
12.1. Toxicity to	ErC50	72h	>=1	mg/l	Scenedesm	Immobilisati on Test) OECD 201		daphnia: 12.1. Toxicity to algae:	EC50	72h	00 >20 0	mg/l	magna Desmodesm us subspicatus		
algae:			000 0		us subspicatus	(Alga, Growth Inhibition Test)		12.1. Toxicity to algae:	EC50	72h	>14	mg/l	Desmodesm us subspicatus	OECD 201 (Alga, Growth	
12.2. Persistence and							Inorganic products	10.0						Inhibition Test)	
degradability: 12.5. Results of							cannot be eliminated from water through biological purification methods. No PBT	12.2. Persistence and degradability:							Inorganic products cannot be eliminate from wate through biological purificatio
PBT and vPvB assessment							substance, No vPvB substance	12.3. Bioaccumulative potential:							Methods. Not relevant for
o-(p-isocyanatobe Toxicity / effect	enzyl)phenyl i Endpoin	socyana Tim	te Valu	Unit	Organism	Test	Notes								inorganic substance
12.1. Toxicity to	t LC0	e 96h	e >	mg/l	Brachydanio	method OECD 203	Analogous	12.4. Mobility in							Not
fish:			100 0		rerio	(Fish, Acute Toxicity Test)	conclusion	soil:							relevant for inorganic substance
12.1. Toxicity to daphnia:	EC50	24h	>10 00	mg/l	Daphnia magna	OECD 202 (Daphnia	Analogous conclusion	12.5. Results of							Not
12.1. Toxicity to	NOEC/N	21d	>10	mg/l	Daphnia	sp. Acute Immobilisati on Test) OECD 202	Analogous	PBT and vPvB assessment							relevant for inorganic
daphnia:	OEL			-	magna	(Daphnia sp. Acute Immobilisati on Test)	conclusion	Diphenylmethane	diisocyanate	isomere	es and ho	mologue	s		substand
12.1. Toxicity to algae:	ErC50	72h	>16 40	mg/l	Scenedesm us	OECD 201 (Alga,	Analogous conclusion	Toxicity / effect	Endpoin t	Tim	Valu e	Unit	Organism	Test method	Notes
algae.			10		subspicatus	Growth Inhibition Test)		12.5. Results of PBT and vPvB assessment							No PBT substanc No vPvB
12.2. Persistence and degradability:		28d	0	%		OECD 302 C (Inherent Biodegradab ility -	With water at the interface, transforms	12.1. Toxicity to fish:	LC50	96h	>10 00	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity	substanc
						Modified MITI Test (II))	slowly with formation of CO2 into a firm, insoluble	12.1. Toxicity to daphnia:	NOEC/N OEL	21d	>= 10	mg/l	Daphnia magna	Test) OECD 211 (Daphnia magna Reproductio	
							reaction product with a high melting point	12.1. Toxicity to daphnia:	EC50	24h	>10 00	mg/l	Daphnia magna	n Test) OECD 202 (Daphnia sp. Acute Immobilisati on Test)	
							(polycarba mide)., Analogous conclusion	12.2. Persistence and degradability:		28d	0	%	activated sludge	OECD 301 C (Ready Biodegradab	Not biodegrad ble
12.3. Bioaccumulative potential:	BCF	28d	200		Cyprinus caprio	OECD 305 (Bioconcentr ation - Flow-	Not to be expected, Analogous							ility - Modified MITI Test (I))	
10 E E						Through Fish Test)	conclusion	12.3. Bioaccumulative	BCF	42d	<14		Cyprinus caprio	OECD 305 (Bioconcentr	A notable biological
12.5. Results of PBT and vPvB assessment Toxicity to	EC50	3h	>10	mg/l	activated	OECD 209	No PBT substance, No vPvB substance Analogous	potential:						ation - Flow- Through Fish Test)	accumula on potential not to be expected
bacteria:			0	-	sludge	(Activated Sludge,	conclusion								(LogPow 3).
						Respiration Inhibition Test (Carbon		12.1. Toxicity to algae:	EC50	72h	>16 40	mg/l	Desmodesm us subspicatus	OECD 201 (Alga, Growth Inhibition	
						and Ammonium		Toxicity to	EC50	3h	>10	mg/l	activated	Test) OECD 209	
Other organisms:	NOEC/N OEL	14d	>10 00		Lumbricus terrestris	Oxidation)) OECD 207 (Earthworm,	Analogous conclusion	bactería:			0	Ū	sludge	(Activated Sludge, Respiration Inhibition	
						Acute Toxicity Tests)								Test (Carbon and	
Calcium carbonat Toxicity / effect	e Endpoin	Tim	Valu	Unit	Organism	Test	Notes	0.1						Ammonium Oxidation))	
Toxicity to bacteria:	t EC50	e 3h	e >10 00	mg/l	activated sludge	method OECD 209 (Activated Sludge,		Other organisms:	NOEC/N OEL	14d	>10 00	mg/k g	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity	
						Respiration Inhibition Test (Carbon and		Other information:	BOD	28d	<10	%		Tests) OECD 302 C (Inherent Biodegradab ility -	
						Ammonium Oxidation))								Modified MITI Test (II))	



Safety data sheet according to Regulation (EC) No 19 Revision date / version: 19.10.2022 / 0015 Replacing version dated / version: 23.03.2022 / 0014 Veild from: 10.10.2022			
Valid from: 19.10.2022 PDF print date: 19.10.2022 KNAPP PM+ KLEBER GLUE COLLA			
Other Information:			Does not contain any organically bound halogens which can contribute to the AOX value in waste waster.
SECTION 13: Disp	osal conside	erations	
13.1 Waste treatment methods For the substance / mixture / residual a EC disposal code no.: The waste codes are recommendations based on the Owing to the user's specific conditions for use and dis allocated under certain circumstances. (2014/955/EU) 08 04 09 waste adhesives and sealants containing org 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 packaing can be recycled. Dispose of packaging that cannot be cleaned in the se 15 01 10 packaging containing residues of or contami RETORS OF Ly coad/by rail (ADR/RID) 14.2. UN proper shipping name: 14.3. Transport hazard class(es): 14.4. Packing group: Classification code: Cransport by ac (IMDG-code) 14.2. UN proper shipping name: 14.3. Transport hazard class(es): 14.4. Packing group: Marine Pollutant: 14.5. Environmental hazards: Transport by arid (ATA) 14.2. UN proper shipping name: 14.4. Packing group: 14.4.4. Packing group: 14.4.4. Packing group: 14.4.4.4. Packing group: 14.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.	scheduled use of th posal, other waste cr anic solvents or othe anic solvents or othe shated by hazardous : nsport infor Not applicable Not applicable Not applicable Not applicable n.a. Not applicable n.a. Not applicable n.a Not applicable n.a	odes may be er hazardous sub ubstance. substances	stances
 14.3. Transport hazard class(es): 14.4. Packing group: 14.5. Environmental hazards: 	n.a. Not applicable Not applicable		
14.6. Special precautions for user Unless specified otherwise, general measures for safe 14.7. Maritime transport in bulk accordi			
Non-dangerous material according to Transport Regul SECTION 15: Reg	lations.		
15.1 Safety, health and environmental r substance or mixture Observe restrictions: Comply with national regulations/laws governing the p implementation of the Directive 94/33/EC)! Regulation (EC) No 1907/2006, Annex XVII 4.4-methylenediphenyl diisocyanate	egulations/legi	slation spec	
o-(p-isocyanatobenzyl)phenyl isocyanate Diphenylmethanediisocyanate, isomeres and homolog 2,2-methylenediphenyl diisocyanate Comply with national regulations/laws governing mate 92/85/EEC)! Comply with trade association/occupational health reg	rnity protection (natio	onal implementat	ion of the Directive
Directive 2010/75/EU (VOC): 15.2 Chemical safety assessment	0 g/l		
A chemical safety assessment is not provided for mixt		ation	
SECTION 16: C			
	8		
Revised sections: These details refer to the product as it is delivered.	aterials is required.		
Revised sections:	erive the classi	ification of th	ne mixture in
Revised sections: These details refer to the product as it is delivered. Employee instruction/training in handling hazardous m Classification and processes used to d	erive the classi 72/2008 (CLP):	ification of th	

	ver	oinaer.com
STOT SE	3, H335	Classification according to calculation procedure.
Skin Irrit.	2, H315	Classification according to calculation procedure.
	ns. 1, H334	Classification according to calculation procedure.
	s. 1, H317	Classification according to calculation procedure.
Carc. 2, H		Classification according to calculation procedure.
STOT RE	2, H373	Classification according to calculation procedure.
and the con H351 Suspe H373 May c H315 Cause H317 May c H319 Cause H332 Harm H334 May c	g phrases represent the posted Hazard Cla stituents (specified in Section 2 and 3). sected of causing cancer by inhalation. ause damage to organs through prolonged as skin irritation. ause an allergic skin reaction. as serious eye irritation. 'ul if inhaled. ause allergy or asthma symptoms or breati ause respiratory irritation.	
Eye Irrit. — STOT SE — Skin Irrit. — Resp. Sens. Skin Sens Carc. — Ca STOT RE —	Eye irritation Specific target organ toxicity - single expo Skin irritation — Respiratory sensitization — Skin sensitization rcinogenicity - Specific target organ toxicity - repeated e: — Acute toxicity - inhalation	
for data: Regulation (Guidelines fi Guidelines c (ECHA). Safety data ECHA Hom GESTIS Sul Germany). EU Occupat 2017/164, ([National Lis	sheets for the constituent substances. page - Information about chemicals. ostance Database (Germany). vironment Agency "Rigoletto" information si ion Exposure Limits Directives 91/322/EEC EU) 2019/1831, each as amended. ts of Occupational Exposure Limits for each	amended (ECHA). Regulation (EG) Nr. 1272/2008 (CLP) as amended the on substances that are hazardous to water 0, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU)
	y abbreviations and acro	nyms used in this document:
ADR European A AOX approx. Art., Art. no ASTM ATE BAM Testing, Get	greement concerning the International Carr Adsorbable organic halogen compounds approximately Article number ASTM International (American Society for Acute Toxicity Estimate Bundesanstalt für Materialforschung und - many) Bundesanstalt für Arbeitsschutz und Arbei	
BSEF bw CAS CLP	The International Bromine Council body weight Chemical Abstracts Service	EGULATION (EC) No 1272/2008 on classification,
CMR DMEL DNEL	d packaging of substances and mixtures) carcinogenic, mutagenic, reproductive toxi Derived Minimum Effect Level Derived No Effect Level	ic
DOC dw e.g. EbCx, EyCx (algae, plan)		i gratia'), for instance zentration/Level of x % on reduction of the biomass
EC ECHA	Éuropean Community European Chemicals Agency = 0, 3, 5, 10, 20, 50, 80, 100) Effect Cond	centration/Level for v % effect
EEC EINECS ELINCS	European Economic Community European Inventory of Existing Commercia European List of Notified Chemical Substa	al Chemical Substances
EN EPA	European Norms United States Environmental Protection Ag	
(algae, plan etc. EU	et cetera European Union	
EVAL Fax. gen.	Ethylene-vinyl alcohol copolymer Fax number general	
GHS GWP Koc	Globally Harmonized System of Classifica Global warming potential Adsorption coefficient of organic carbon in	-
Kow IARC	octanol-water partition coefficient International Agency for Research on Can	
IMDG-code	International Air Transport Association International Bulk Chemical (Code) International Maritime Code for Dangerous	s Goods
incl. IUCLID IUPAC	including, inclusive International Uniform Chemical Information International Union for Pure Applied Chem	
LC50 LD50	Lethal Concentration to 50 % of a test pop Lethal Dose to 50% of a test population (M	ulation ledian Lethal Dose)
Log Koc Log Kow, Lo LQ	Limited Quantities	partition coefficient
MARPOL n.a. n.av.	International Convention for the Prevention not applicable not available	n of Marine Pollution from Ships



B)	
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	a sheet according to Regulation (EC) No 1907/2006, Annex II
Revision d	ate / version: 19.10.2022 / 0015
Replacing	version dated / version: 23.03.2022 / 0014
Valid from:	19.10.2022
PDF print of	late: 19.10.2022
KNAPP PM	/+ KLEBER GLUE COLLA
n.c.	not checked
n.d.a.	no data available
NIOSH	National Institute for Occupational Safety and Health (USA)
NLP	No-longer-Polymer
NOEC, NO	EL No Observed Effect Concentration/Level
OECD	Organisation for Economic Co-operation and Development
org.	organic
OŜHA	Occupational Safety and Health Administration (USA)
PBT	persistent, bioaccumulative and toxic
PE	Polyethylene
PNEC	Predicted No Effect Concentration
ppm	parts per million
PVC	PolyvinyIchloride
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No
1907/2006	concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT	List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS
No. or othe	r numerical identifier. List Numbers do not have any legal significance, rather they are purely
technical id	lentifiers 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
wwt	wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge. No responsibility. These statements were made by: **Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49** 5233 94 17 0, Fax: +49 5233 94 17 09

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