



Safety Data Sheet according to (EC) No 1907/2006 as amended

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BOND480

SDS No. : 290047
V009.1

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

1.1. Product identifier

BOND480

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

Intended use:

1-component-polyurethane adhesive

1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA

Henkelstr. 67

40589 Düsseldorf

Germany

Phone: +49 211 797 0

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or www.henkel-adhesives.com.

1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Acute toxicity	Category 4
H332 Harmful if inhaled.	
Route of Exposure: Inhalation	
Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Respiratory sensitizer	Category 1
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	
Target organ: respiratory tract irritation	
Specific target organ toxicity - repeated exposure	Category 2
H373 May cause damage to organs through prolonged or repeated exposure.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene]

4,4'- methylenediphenyl diisocyanate

Signal word:

Danger

Hazard statement:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

Supplemental information

As from 24 August 2023 adequate training is required before industrial or professional use.
Further information: <https://www.feica.eu/PUinfo>

**Precautionary statement:
Prevention**

P260 Do not breathe dust/fume/spray.
P280 Wear protective gloves/eye protection.

**Precautionary statement:
Response**

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

2.3. Other hazards

Following substances are present in a concentration \geq the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration \geq the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M- factors and ATEs	Add. Information
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene] 59675-67-1	20- 40 %	Acute Tox. 4, Inhalation, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Resp. Sens. 1, H334 STOT SE 3, H335 STOT RE 2, H373	oral:ATE = > 5.000 mg/kg inhalation:ATE = 1,5 mg/l;dust/mist	
4,4'-methylenediphenyl diisocyanate 101-68-8 202-966-0 01-2119457014-47	0,1- < 1 %	Carc. 2, H351 Acute Tox. 4, Inhalation, H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317	Eye Irrit. 2; H319; C >= 5 % Skin Irrit. 2; H315; C >= 5 % Resp. Sens. 1; H334; C >= 0,1 % STOT SE 3; H335; C >= 5 %	

If no ATE values are displayed, please refer to LD/LC50 values in Section 11.

For full text of the H - statements and other abbreviations see section 16 "Other information".

SECTION 4: First aid measures**4.1. Description of first aid measures**

General information:

Symptoms of poisoning may occur even after several hours, continue medical observation for at least 48 hours after the accident.

Inhalation:

Fresh air, oxygen supply, warmth; seek specialist medical attention.

Delayed effects possible after inhalation.

Skin contact:

IF ON SKIN: Wash with plenty of soap and water.

In case of adverse health effects seek medical advice.

Eye contact:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

SKIN: Rash, Urticaria.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

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

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

All common extinguishing agents are suitable.

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In case of fire toxic gases can be released.

5.3. Advice for firefighters

Wear protective equipment.

Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment.

Avoid contact with skin and eyes.

Keep unprotected persons away.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Dispose of contaminated material as waste according to Section 13.

Remove mechanically.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Take off contaminated clothing and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.

Keep away from heat and direct sunlight.

Store in a cool, dry place.

Storage at 15 to 25°C is recommended.

Ensure that storage and workrooms are adequately ventilated.

7.3. Specific end use(s)

1-component-polyurethane adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Germany

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Carbon black 1333-86-4		1,25	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Carbon black 1333-86-4		10	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Carbon black 1333-86-4			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Limestone 1317-65-3			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Limestone 1317-65-3		1,25	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Limestone 1317-65-3		10	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
4,4'-Methylenediphenyl diisocyanate 101-68-8			Skin designation:	Can be absorbed through the skin.	TRGS 900
4,4'-Methylenediphenyl diisocyanate 101-68-8			STEL (Short Term Exposure Limit) factor:	1 Substance listed with both Peak factor and STEL factor. The Peak factor is supplied with the AGW values.	TRGS 900
4,4'-Methylenediphenyl diisocyanate 101-68-8		0,05	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
4,4'-Methylenediphenyl diisocyanate 101-68-8			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (freshwater)		0,0037 mg/l				
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (intermittent releases)		0,037 mg/l				
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (marine water)		0,00037 mg/l				
4,4'- methylenediphenyl diisocyanate 101-68-8	sediment (freshwater)				11,7 mg/kg		
4,4'- methylenediphenyl diisocyanate 101-68-8	sediment (freshwater)				1,17 mg/kg		
4,4'- methylenediphenyl diisocyanate 101-68-8	Soil				2,33 mg/kg		
4,4'- methylenediphenyl diisocyanate 101-68-8	Predator						no potential for bioaccumulation

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
4,4'- methylenediphenyl diisocyanate 101-68-8	Workers	inhalation	Long term exposure - local effects		0,05 mg/m3	no potential for bioaccumulation
4,4'- methylenediphenyl diisocyanate 101-68-8	Workers	inhalation	Acute/short term exposure - local effects		0,1 mg/m3	no potential for bioaccumulation
4,4'- methylenediphenyl diisocyanate 101-68-8	General population	inhalation	Long term exposure - local effects		0,025 mg/m3	no potential for bioaccumulation
4,4'- methylenediphenyl diisocyanate 101-68-8	General population	inhalation	Acute/short term exposure - local effects		0,05 mg/m3	no potential for bioaccumulation

Biological Exposure Indices:

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
4,4'-Methylenediphenyl diisocyanate 101-68-8	4,4-Diaminodiphenylmethane	Creatinine in urine	Sampling time: End of shift.	10 µg/g	DE BAT	BAT values reflect the total physical load of workplace substances absorbed through inhalation, dermally, etc. With occupational exposure to MDI, parameter 4,4'-Diaminodiphenylmethane (MDA) in the urine covers all components of a complex MDI mixture, since both monomers and oligomers of the MDI are degraded independent of the exposure path of the monomeric MDI. In contrast, the MAK value for MDI takes into account only the monomer MDI portion.	

8.2. Exposure controls:

Engineering controls:

Use only in well ventilated areas.

Respiratory protection:

The product should only be used at workplaces with intensive ventilation/extraction.

If intensive ventilation/extraction is not possible respiratory protection equipment with ABEK P2 filter (EN 14387) should be worn.

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; \geq 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; \geq 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

Skin protection:

Wear protective equipment.

Protective clothing that covers arms and legs.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

Use only personal protection that's CE-labelled according to Directive 89/686/EEC (Europe) or to Regulation No. 819 of 19 August 1994 (Norway), or equivalent.

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.

Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Delivery form	paste
Colour	black
Odor	Faintly, specific
Physical state	solid
Melting point	Not applicable, Determination technically not possible
Solidification temperature	Not applicable, Product is a solid.
Initial boiling point	Not applicable, Decomposes > 140°C (284°F).
Flammability	The product is not flammable.
Explosive limits	Not applicable, Product is a solid.
Flash point	Not applicable, Product is a solid.
Auto-ignition temperature	Not applicable, Product is a solid.
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH	Not applicable, Product reacts with water.
Viscosity (kinematic)	Not applicable, Product is a solid.
Viscosity, dynamic (Brookfield; Conc.: 100 % product)	3.500.000 - 4.500.000 mPa.s viscosity Rheomat 180; HT-method
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	Not applicable
Vapour pressure (20 °C (68 °F))	Mixture < 0,1 hPa
Density (23 °C (73.4 °F))	1,22 g/cm ³ Dichte Pyknometer; HT-Methode; Henkel Iberica NS-06
Relative vapour density:	Not applicable, Product is a solid.
Particle characteristics	Not applicable, mixture is a paste.

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reaction with water, alcohols, amines.

Reacts with water: Pressure built up in closed vessel (CO₂).

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Humidity

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

At higher temperatures isocyanate may be released.

Carbon dioxide is generated under contact with moisture, leading to pressure in the cans. Danger of cans bursting!

SECTION 11: Toxicological information**General toxicological information:**

An allergic reaction cannot be excluded after repeated skin contact.

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3- propanetriol (3:1), polymer with 1,1'- methylenebis[4- isocyanatobenzene] 59675-67-1	Acute toxicity estimate (ATE)	> 5.000 mg/kg		Expert judgement
4,4'- methylenediphenyl diisocyanate 101-68-8	LD50	> 2.000 mg/kg	rat	other guideline:

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3- propanetriol (3:1), polymer with 1,1'- methylenebis[4- isocyanatobenzene] 59675-67-1	LD50	> 9.400 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
4,4'- methylenediphenyl diisocyanate 101-68-8	LD50	> 9.400 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3- propanetriol (3:1), polymer with 1,1'- methylenebis[4- isocyanatobenzene] 59675-67-1	Acute toxicity estimate (ATE)	1,5 mg/l	dust/mist	4 h		Expert judgement

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	irritating		human	Weight of evidence

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3- propanetriol (3:1), polymer with 1,1'- methylenebis[4- isocyanatobenzene] 59675-67-1	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3- propanetriol (3:1), polymer with 1,1'- methylenebis[4- isocyanatobenzene] 59675-67-1	sensitising	Respiratory sensitisation	guinea pig	not specified
4,4'- methylenediphenyl diisocyanate 101-68-8	sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
4,4'- methylenediphenyl diisocyanate 101-68-8	sensitising	Respiratory sensitisation	guinea pig	not specified

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3- propanetriol (3:1), polymer with 1,1'- methylenebis[4- isocyanatobenzene] 59675-67-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
4,4'- methylenediphenyl diisocyanate 101-68-8	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3- propanetriol (3:1), polymer with 1,1'- methylenebis[4- isocyanatobenzene] 59675-67-1	negative	inhalation		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	negative	inhalation		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	carcinogenic	inhalation: aerosol	2 y 6 h/d	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

No data available.

STOT-single exposure:

No data available.

STOT-repeated exposure:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3- propanetriol (3:1), polymer with 1,1'- methylenebis[4- isocyanatobenzene] 59675-67-1	NOAEL 0,0002 mg/l	inhalation: aerosol	2 years 6 h/d; 5 d/w	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
4,4'- methylenediphenyl diisocyanate 101-68-8	NOAEL 0,0002 mg/l	inhalation: aerosol	main: 2 y; satellite:1 y 6 h/d; 5 d/w	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information**General ecological information:**

Do not empty into drains, soil or bodies of water.

12.1. Toxicity**Toxicity (Fish):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene] 59675-67-1	LC50	> 1.000 mg/l	96 h	not specified	not specified
4,4'-methylenediphenyl diisocyanate 101-68-8	LL50	> 100 mg/l	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (aquatic invertebrates):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene] 59675-67-1	EC50	> 1.000 mg/l	48 h	not specified	not specified
4,4'-methylenediphenyl diisocyanate 101-68-8	EC50	> 100 mg/l	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)

Chronic toxicity (aquatic invertebrates):

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
4,4'-methylenediphenyl diisocyanate 101-68-8	NOEC	10 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene] 59675-67-1	EC50	> 1.640 mg/l	72 h	not specified	not specified
4,4'- methylenediphenyl diisocyanate 101-68-8	EL50	> 100 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	NOELR	100 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity (microorganisms):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[4-isocyanatobenzene] 59675-67-1	IC50	> 100 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	EC50	> 1.000 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

12.3. Bioaccumulative potential

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	92 - 200	28 d		Cyprinus carpio	OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)

12.4. Mobility in soil

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	LogPow	Temperature	Method
4,4'-methylenediphenyl diisocyanate 101-68-8	4,51	22 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

12.5. Results of PBT and vPvB assessment

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	PBT / vPvB
4,4'-methylenediphenyl diisocyanate 101-68-8	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

080409

SECTION 14: Transport information

- 14.1. UN number or ID number**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.2. UN proper shipping name**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.3. Transport hazard class(es)**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.4. Packing group**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.5. Environmental hazards**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.6. Special precautions for user**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.7. Maritime transport in bulk according to IMO instruments**
not applicable

SECTION 15: Regulatory information

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	benzo[a]pyrene CAS 50-32-8 Benzo(k)fluoranthene CAS 207-08-9 Benzo(b)fluoranthene CAS 205-99-2

VOC content
(2010/75/EU) 0,1 %

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK: WGK 1: slightly hazardous to water (Ordinance on facilities for handling substances that are hazardous to water (AwSV))
Classification according to AwSV, Annex 1 (5.2)

BG regulations, rules, infos:

BG data sheet: BGI 524 Hazardous substances: polyurethane production and processing / isocyanates (M 044)

Storage class according to TRGS 510: 10

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

Further information:

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This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

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