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

SDS No. : 75924
V015.0

TEROSON PU 9100 GY

Revision: 21.08.2023
printing date: 29.08.2023
Replaces version from: 22.08.2022

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

1.1. Product identifier
TEROSON PU 9100 GY

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

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

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 Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 dibutyltin dilaurate 4-isocyanatosulphonyltoluene
Signal word:	Danger
Hazard statement:	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. 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 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.
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 ≥ 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 ≥ 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	10- < 20 %	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	
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4 918-167-1 01-2119472146-39	5- < 10 %	Asp. Tox. 1, H304 Flam. Liq. 3, H226	dermal:ATE = 2.201 mg/kg	
Reaction mass of ethylbenzene and m-xylene and p-xylene 01-2119555267-33	1- < 5 %	Aquatic Chronic 3, H412 Flam. Liq. 3, H226 Asp. Tox. 1, H304 Acute Tox. 4, Dermal, H312 Acute Tox. 4, Inhalation, H332 Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335 STOT RE 2, H373	dermal:ATE = 1.100 mg/kg oral:ATE = 3.523 mg/kg inhalation:ATE = 17,4 mg/l;vapour	
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7 236-675-5 01-2119489379-17	1- < 3 %			
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 %	
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2 500-060-2 01-2119970543-34	0,1- < 1 %	Skin Sens. 1, H317 STOT SE 3, H335 Acute Tox. 4, Inhalation, H332	inhalation:ATE = 1,5 mg/l;dust/mist	
4-isocyanatosulphonyltoluene 4083-64-1 223-810-8 01-2119980050-47	0,1- < 1 %	Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334	Eye Irrit. 2; H319; C >= 5 % STOT SE 3; H335; C >= 5 % Skin Irrit. 2; H315; C >= 5 %	
dibutyltin dilaurate 77-58-7 201-039-8 01-2119496068-27	0,1- < 0,2 %	Acute Tox. 4, Oral, H302 Aquatic Chronic 1, H410 Aquatic Acute 1, H400 STOT RE 1, H372 STOT SE 1, H370 Repr. 1B, H360FD Muta. 2, H341 Skin Sens. 1, H317 Eye Irrit. 2, H319	M acute = 1 M chronic = 1 ===== oral:ATE = 500 mg/kg	

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

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
Remove mechanically.
Dispose of contaminated material as waste according to Section 13.

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.
Temperatures between + 10 °C and + 25 °C
Store in a cool, dry place.
Keep container tightly sealed.

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/m³	Value type	Short term exposure limit category / Remarks	Regulatory list
Polyvinyl chloride 9002-86-2			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Polyvinyl chloride 9002-86-2		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
Polyvinyl chloride 9002-86-2		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
Calcium carbonate 471-34-1			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Calcium carbonate 471-34-1		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
Calcium carbonate 471-34-1		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			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
Silicon dioxide 112945-52-5		4	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
Silicon dioxide 112945-52-5			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Silicon dioxide 112945-52-5		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
Silicon dioxide 112945-52-5		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
Titanium dioxide 13463-67-7			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Titanium dioxide		10	Exposure limit(s):	2	TRGS 900

13463-67-7				If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	
Titanium dioxide 13463-67-7		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
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	
Reaction mass of ethylbenzene and m-xylene and p-xylene	aqua (freshwater)		0,044 mg/l				
Reaction mass of ethylbenzene and m-xylene and p-xylene	Freshwater - intermittent		0,01 mg/l				
Reaction mass of ethylbenzene and m-xylene and p-xylene	aqua (marine water)		0,004 mg/l				
Reaction mass of ethylbenzene and m-xylene and p-xylene	Marine water - intermittent		0,001 mg/l				
Reaction mass of ethylbenzene and m-xylene and p-xylene	sewage treatment plant (STP)		1,6 mg/l				
Reaction mass of ethylbenzene and m-xylene and p-xylene	sediment (freshwater)				2,52 mg/kg		
Reaction mass of ethylbenzene and m-xylene and p-xylene	sediment (marine water)				0,252 mg/kg		
Reaction mass of ethylbenzene and m-xylene and p-xylene	Soil				0,852 mg/kg		
Reaction mass of ethylbenzene and m-xylene and p-xylene	Predator						no potential for bioaccumulation
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
Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2	sewage treatment plant (STP)		6,46 mg/l				
p-Toluenesulphonyl isocyanate 4083-64-1	aqua (freshwater)		0,03 mg/l				
p-Toluenesulphonyl isocyanate 4083-64-1	aqua (marine water)		0,003 mg/l				
p-Toluenesulphonyl isocyanate 4083-64-1	sewage treatment plant (STP)		0,4 mg/l				
p-Toluenesulphonyl isocyanate 4083-64-1	sediment (freshwater)				0,172 mg/kg		
p-Toluenesulphonyl isocyanate 4083-64-1	sediment (marine water)				0,017 mg/kg		
p-Toluenesulphonyl isocyanate 4083-64-1	Soil				0,017 mg/kg		
dibutyltin dilaurate 77-58-7	aqua (freshwater)		0,000463 mg/l				
dibutyltin dilaurate 77-58-7	aqua (marine water)		0,000046 mg/l				
dibutyltin dilaurate 77-58-7	aqua (intermittent releases)		0,005 mg/l				
dibutyltin dilaurate 77-58-7	sewage treatment plant		100 mg/l				

	(STP)						
dibutyltin dilaurate 77-58-7	sediment (freshwater)				0,05 mg/kg		
dibutyltin dilaurate 77-58-7	sediment (marine water)				0,005 mg/kg		
dibutyltin dilaurate 77-58-7	Soil				0,0407 mg/kg		
dibutyltin dilaurate 77-58-7	oral				0,2 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Reaction mass of ethylbenzene and m-xylene and p-xylene	Workers	inhalation	Long term exposure - systemic effects		221 mg/m3	no potential for bioaccumulation
Reaction mass of ethylbenzene and m-xylene and p-xylene	Workers	inhalation	Long term exposure - local effects		221 mg/m3	no potential for bioaccumulation
Reaction mass of ethylbenzene and m-xylene and p-xylene	Workers	dermal	Long term exposure - systemic effects		212 mg/kg	no potential for bioaccumulation
Reaction mass of ethylbenzene and m-xylene and p-xylene	General population	inhalation	Long term exposure - systemic effects		65,3 mg/m3	no potential for bioaccumulation
Reaction mass of ethylbenzene and m-xylene and p-xylene	General population	dermal	Long term exposure - systemic effects		125 mg/kg	no potential for bioaccumulation
Reaction mass of ethylbenzene and m-xylene and p-xylene	General population	oral	Long term exposure - systemic effects		12,5 mg/kg	no potential for bioaccumulation
Reaction mass of ethylbenzene and m-xylene and p-xylene	Workers	inhalation	Acute/short term exposure - systemic effects		442 mg/m3	no potential for bioaccumulation
Reaction mass of ethylbenzene and m-xylene and p-xylene	Workers	inhalation	Acute/short term exposure - local effects		442 mg/m3	no potential for bioaccumulation
Reaction mass of ethylbenzene and m-xylene and p-xylene	General population	inhalation	Acute/short term exposure - systemic effects		260 mg/m3	no potential for bioaccumulation
Reaction mass of ethylbenzene and m-xylene and p-xylene	General population	inhalation	Long term exposure - local effects		65,3 mg/m3	no potential for bioaccumulation
Reaction mass of ethylbenzene and m-xylene and p-xylene	General population	inhalation	Acute/short term exposure - local effects		260 mg/m3	no potential for bioaccumulation
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
Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2	Workers	inhalation	Acute/short term exposure - local effects		1 mg/m3	
Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2	Workers	inhalation	Long term exposure - local effects		0,5 mg/m3	
p-Toluenesulphonyl isocyanate 4083-64-1	Workers	inhalation	Long term exposure - systemic effects		3,24 mg/m3	
p-Toluenesulphonyl isocyanate 4083-64-1	Workers	dermal	Long term exposure - systemic effects		0,92 mg/kg	
p-Toluenesulphonyl isocyanate 4083-64-1	General population	inhalation	Long term exposure - systemic effects		0,8 mg/m3	
p-Toluenesulphonyl isocyanate 4083-64-1	General population	dermal	Long term exposure - systemic effects		0,46 mg/kg	
p-Toluenesulphonyl isocyanate 4083-64-1	General population	oral	Long term exposure - systemic effects		0,46 mg/kg	
dibutyltin dilaurate 77-58-7	Workers	dermal	Acute/short term exposure -		2,08 mg/kg	

			systemic effects			
dibutyltin dilaurate 77-58-7	Workers	Dermal	Long term exposure - systemic effects		0,43 mg/kg	
dibutyltin dilaurate 77-58-7	Workers	inhalation	Long term exposure - systemic effects		0,02 mg/m3	
dibutyltin dilaurate 77-58-7	General population	dermal	Acute/short term exposure - systemic effects		0,5 mg/kg	
dibutyltin dilaurate 77-58-7	General population	inhalation	Acute/short term exposure - systemic effects		0,04 mg/m3	
dibutyltin dilaurate 77-58-7	General population	oral	Acute/short term exposure - systemic effects		0,02 mg/kg	
dibutyltin dilaurate 77-58-7	General population	dermal	Long term exposure - systemic effects		0,16 mg/kg	
dibutyltin dilaurate 77-58-7	General population	inhalation	Long term exposure - systemic effects		0,005 mg/m3	
dibutyltin dilaurate 77-58-7	General population	oral	Long term exposure - systemic effects		0,003 mg/kg	
dibutyltin dilaurate 77-58-7	Workers	inhalation	Acute/short term exposure - systemic effects		0,059 mg/m3	

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 monomerous 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; >= 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; >= 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	grey
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.
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	Not applicable Mixture
Vapour pressure (20 °C (68 °F))	< 0,1 hPa
Density (20 °C (68 °F))	1,17 - 1,23 g/cm3
Relative vapour density:	Not applicable, Product is a solid.
Particle characteristics	Not applicable, mixture is a paste.

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Flammable Solids

Burning rate	0,26 mm/s

Burning time	580 s; no method / method unknown

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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Reaction mass of ethylbenzene and m-xylene and p-xylene	LD50	3.523 mg/kg	rat	EU Method B.1 (Acute Toxicity (Oral))
Reaction mass of ethylbenzene and m-xylene and p-xylene	Acute toxicity estimate (ATE)	3.523 mg/kg		Expert judgement
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	LD50	> 5.000 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
4,4'- methylenediphenyl diisocyanate 101-68-8	LD50	> 2.000 mg/kg	rat	other guideline:
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
4-isocyanatosulphonyltoluene 4083-64-1	LD50	2.330 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
dibutyltin dilaurate 77-58-7	Acute toxicity estimate (ATE)	500 mg/kg		Expert judgement
dibutyltin dilaurate 77-58-7	LD50	500 - 2.000 mg/kg	rat	not specified

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)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	LD50	> 2.200 - 2.500 mg/kg	rabbit	not specified
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	Acute toxicity estimate (ATE)	2.201 mg/kg		Expert judgement
Reaction mass of ethylbenzene and m-xylene and p-xylene	Acute toxicity estimate (ATE)	1.100 mg/kg		Expert judgement
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	LD50	>= 10.000 mg/kg	hamster	not specified
4,4'- methylenediphenyl diisocyanate 101-68-8	LD50	> 9.400 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	LD50	> 15.800 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
4-isocyanatosulphonyltoluene 4083-64-1	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
dibutyltin dilaurate 77-58-7	LD50	> 2.000 mg/kg	rat	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
Reaction mass of ethylbenzene and m-xylene and p-xylene	Acute toxicity estimate (ATE)	17,4 mg/l	vapour			Expert judgement
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	LC50	> 6,82 mg/l	dust	4 h	rat	not specified
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	Acute toxicity estimate (ATE)	1,5 mg/l	dust/mist			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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	mildly irritating		rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Reaction mass of ethylbenzene and m-xylene and p-xylene	moderately irritating		rabbit	not specified
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	not irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
4,4'- methylenediphenyl diisocyanate 101-68-8	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	slightly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
dibutyltin dilaurate 77-58-7	not corrosive		Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
dibutyltin dilaurate 77-58-7	not irritating		Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)	other guideline:
dibutyltin dilaurate 77-58-7	not corrosive		Corrositex Biobarrier Membrane (reconstituted collagen matrix)	OECD Guideline 435 (In Vitro Membrane Barrier Test Method for Skin 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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Reaction mass of ethylbenzene and m-xylene and p-xylene	moderately irritating		rabbit	not specified
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	slightly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
dibutyltin dilaurate 77-58-7	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	not sensitising	Guinea pig maximisation test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Reaction mass of ethylbenzene and m-xylene and p-xylene	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
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
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
dibutyltin dilaurate 77-58-7	Sensitizing	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

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)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	negative	in vitro mammalian chromosome aberration test	with and without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	negative	sister chromatid exchange assay in mammalian cells	with and without		equivalent or similar to OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells)
Reaction mass of ethylbenzene and m-xylene and p-xylene	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Reaction mass of ethylbenzene and m-xylene and p-xylene	negative	in vitro mammalian chromosome aberration test	with and without		EU Method B.10 (Mutagenicity)
Reaction mass of ethylbenzene and m-xylene and p-xylene	negative	sister chromatid exchange assay in mammalian cells	with and without		EU Method B.19 (Sister Chromatid Exchange Assay In Vitro)
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
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)
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
4-isocyanatosulphonyltoluene 4083-64-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
4-	negative	in vitro mammalian	with and without		not specified

isocyanatosulphonyltoluene 4083-64-1		chromosome aberration test			
dibutyltin dilaurate 77-58-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
dibutyltin dilaurate 77-58-7	positive	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
dibutyltin dilaurate 77-58-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
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)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	negative			mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	negative			rat	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
Reaction mass of ethylbenzene and m-xylene and p-xylene	negative	intraperitoneal		rat	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	negative	inhalation		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
dibutyltin dilaurate 77-58-7	positive	oral: gavage		mouse	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**
Reaction mass of ethylbenzene and m-xylene and p-xylene	not carcinogenic	oral: gavage	103 w 5 d/w	rat	male/female	EU Method B.32 (Carcinogenicity Test)
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	not carcinogenic	inhalation	24 m 6 h/d; 5 d/w	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
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:

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

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	NOAEL P >= 1.720 mg/kg NOAEL F1 >= 1.720 mg/kg	screening	inhalation	rat	OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	NOAEL P > 1.000 mg/kg NOAEL F1 > 1.000 mg/kg		oral: gavage	rat	OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)
4-isocyanatosulphonyltoluene 4083-64-1	NOAEL F1 300 mg/kg	one-generation study	oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

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)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	NOAEL 5.000 mg/kg	oral: gavage	13 weeks daily	rat	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Reaction mass of ethylbenzene and m-xylene and p-xylene	NOAEL 250 mg/kg	oral: gavage	103 w 5 d/w	rat	other guideline:
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	NOAEL 1.000 mg/kg	oral: gavage	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
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:

The mixture is classified based on Viscosity data.

Hazardous substances CAS-No.	Viscosity (kinematic) Value	Temperature	Method	Remarks
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	0,34 mm2/s	40 °C	not specified	

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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	LL50	> 1.000 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Reaction mass of ethylbenzene and m-xylene and p-xylene	LC50	2,6 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Reaction mass of ethylbenzene and m-xylene and p-xylene	NOEC	> 1,3 mg/l	56 d	Oncorhynchus mykiss	other guideline:
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	LC50	Toxicity > Water solubility	48 h	Danio rerio	other guideline:
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	NOEC	Toxicity > Water solubility	8 d	Danio rerio	OECD Guideline 212 (Fish, Short-term Toxicity Test on Embryo and Sac-Fry Stages)
4,4'- methylenediphenyl diisocyanate 101-68-8	LL50	> 100 mg/l	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	LC50	> 100 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
4-isocyanatosulphonyltoluene 4083-64-1	LC50	> 45 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
dibutyltin dilaurate 77-58-7	LC50	3,1 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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	EL50	> 1.000 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Reaction mass of ethylbenzene and m-xylene and p-xylene		> 1 mg/l	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Titanium dioxide < 1%	EC50	Toxicity > Water	48 h	Daphnia magna	OECD Guideline 202

particles with diameter ≤ 10 µm 13463-67-7		solubility			(Daphnia sp. Acute Immobilisation Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	EC50	> 100 mg/l	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	EC50	> 100 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4-isocyanatosulphonyltoluene 4083-64-1	EC50	> 100 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
dibutyltin dilaurate 77-58-7	EC50	0,463 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

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**
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	NOELR	> 1 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Reaction mass of ethylbenzene and m-xylene and p-xylene	NOEC	1,17 mg/l	7 d	Ceriodaphnia dubia	other guideline:
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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	EL50	> 1.000 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	NOELR	1.000 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction mass of ethylbenzene and m-xylene and p-xylene	EC50	4,7 mg/l	48 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction mass of ethylbenzene and m-xylene and p-xylene	NOEC	0,44 mg/l	73 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	EC50	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	NOEC	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
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)
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	EC0	> 100 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
4-isocyanatosulphonyltoluene 4083-64-1	EC50	30 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
4-isocyanatosulphonyltoluene 4083-64-1	EC10	23 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
dibutyltin dilaurate 77-58-7	IC50	> 3 mg/l	72 h	Scenedesmus subspicatus (new name: 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)
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	EC50	Toxicity > Water solubility	3 h	activated sludge	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
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)
4-isocyanatosulphonyltoluene 4083-64-1	EC 50	2.511 mg/l			OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
dibutyltin dilaurate	EC50	> 1.000 mg/l	3 h	activated sludge of a	OECD Guideline 209

77-58-7				predominantly domestic sewage	(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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	not readily biodegradable.	aerobic	31,3 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	inherently biodegradable	aerobic	72 %	60 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Reaction mass of ethylbenzene and m-xylene and p-xylene	readily biodegradable	aerobic	94 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2		aerobic	1 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
4-isocyanatosulphonyltoluene 4083-64-1	readily biodegradable	aerobic	83 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
dibutyltin dilaurate 77-58-7	not readily biodegradable.	anaerobic	23 %	39 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
Reaction mass of ethylbenzene and m-xylene and p-xylene	25,9	56 d		Oncorhynchus mykiss	other guideline:
4,4'- methylenediphenyl diisocyanate 101-68-8	92 - 200	28 d		Cyprinus carpio	OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)
dibutyltin dilaurate 77-58-7	31 - 155			Cyprinus carpio	OECD Guideline 305 (Bioconcentration: 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
Reaction mass of ethylbenzene and m-xylene and p-xylene	3,16	20 °C	other guideline:
4,4'- methylenediphenyl diisocyanate 101-68-8	4,51	22 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
4-isocyanatosulphonyltoluene 4083-64-1	0,6	30 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
dibutyltin dilaurate 77-58-7	4,44	20,8 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask 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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 90622-57-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Reaction mass of ethylbenzene and m-xylene and p-xylene	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Titanium dioxide < 1% particles with diameter ≤ 10 µm 13463-67-7	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.
4,4'- methylenediphenyl diisocyanate 101-68-8	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 28182-81-2	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
4-isocyanatosulphonyltoluene 4083-64-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
dibutyltin dilaurate 77-58-7	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):	Hexachlorobenzene CAS 118-74-1

VOC content (2010/75/EU) 6,6 %

VOC Paints and Varnishes (EU):

Product (sub)category: This product is not a subject of the Directive 2004/42/EC

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: 11

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:

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
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.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H360FD May damage fertility. May damage the unborn child.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

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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