



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

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TEROSON PU 9100 WH

SDS No. : 75915
V012.0

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

1.1. Product identifier

TEROSON PU 9100 WH

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

Intended use:
adhesive and sealant

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
Fax-no.: +49 211 798 2009

ua-productsafety.de@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):

Not flammable according burning rate test N.1 UN Manual of Tests and Criteria
Respiratory sensitizer
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Category 1

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

4,4'- methylenediphenyl diisocyanate

4-isocyanatosulphonyltoluene

Signal word:	Danger
Hazard statement:	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Supplemental information	EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust. Contains: dibutyltin dilaurate; Hexane, 1,6-diisocyanato-, homopolymer, V=7000-11000 mPas/23 May produce an allergic reaction.
Precautionary statement: Prevention	P261 Avoid breathing vapors.
Precautionary statement: Response	P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

2.3. Other hazards

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General chemical description:

1-Component moisture-curing sealant

Base substances of preparation:

Polyurethane

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	918-167-1 01-2119472146-39	5- < 10 %	Aquatic Chronic 4 H413 Asp. Tox. 1 H304 Flam. Liq. 3 H226
Titanium dioxide 13463-67-7	236-675-5 01-2119489379-17	1- < 5 %	
Xylene - mixture of isomeres 1330-20-7	215-535-7 01-2119488216-32	1- < 5 %	Asp. Tox. 1 H304 Acute Tox. 4; Inhalation H332 Acute Tox. 4; Dermal H312 Skin Irrit. 2 H315 Flam. Liq. 3 H226 Eye Irrit. 2 H319 STOT SE 3 H335 STOT RE 2 H373
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. 1B H317
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
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
dibutyltin dilaurate 77-58-7	201-039-8 01-2119496068-27	0,1- < 0,25 %	Skin Corr. 1C H314 Skin Sens. 1 H317 Muta. 2 H341 Repr. 1B H360FD STOT SE 1 H370 STOT RE 1 H372 Aquatic Acute 1 H400 Aquatic Chronic 1 H410

**For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.**

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:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

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

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

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

An allergic reaction cannot be excluded after repeated skin contact.

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:

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.

Store in a cool place.

Keep container tightly sealed.

Storage at 15 to 25°C is recommended.

7.3. Specific end use(s)

adhesive and sealant

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
Polyvinyl chloride 9002-86-2			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Polyvinyl chloride 9002-86-2		1,25	Exposure limit(s):		TRGS 900
Polyvinyl chloride 9002-86-2		10	Exposure limit(s):	2	TRGS 900
Xylene 1330-20-7 [XYLENE, MIXED ISOMERS, PURE]	50	221	Time Weighted Average (TWA):	Indicative	ECLTV
Xylene 1330-20-7 [XYLENE, MIXED ISOMERS, PURE]	100	442	Short Term Exposure Limit (STEL):	Indicative	ECLTV
Xylene 1330-20-7			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Xylene 1330-20-7			Skin designation:	Can be absorbed through the skin.	TRGS 900
Xylene 1330-20-7	100	440	Exposure limit(s):	2	TRGS 900
Titanium dioxide 13463-67-7			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Titanium dioxide 13463-67-7		1,25	Exposure limit(s):		TRGS 900
Titanium dioxide 13463-67-7		10	Exposure limit(s):	2	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
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
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

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Titanium dioxide 13463-67-7	aqua (freshwater)						no hazard identified
Titanium dioxide 13463-67-7	aqua (marine water)						no hazard identified
Titanium dioxide 13463-67-7	sewage treatment plant (STP)						no hazard identified
Titanium dioxide 13463-67-7	sediment (freshwater)						no hazard identified
Titanium dioxide 13463-67-7	sediment (marine water)						no hazard identified
Titanium dioxide 13463-67-7	Soil						no hazard identified
Titanium dioxide 13463-67-7	Aquatic (intermit. releases)						no hazard identified
Titanium dioxide 13463-67-7	Predator						no hazard identified
Xylene - mixture of isomeres 1330-20-7	aqua (freshwater)		0,327 mg/l				
Xylene - mixture of isomeres 1330-20-7	sediment (freshwater)				12,46 mg/kg		
Xylene - mixture of isomeres 1330-20-7	Soil				2,31 mg/kg		
Xylene - mixture of isomeres 1330-20-7	aqua (marine water)		0,327 mg/l				
Xylene - mixture of isomeres 1330-20-7	aqua (intermittent releases)		0,327 mg/l				
Xylene - mixture of isomeres 1330-20-7	sewage treatment plant (STP)		6,58 mg/l				
Xylene - mixture of isomeres 1330-20-7	sediment (marine water)				12,46 mg/kg		
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (freshwater)		1 mg/l				
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (marine water)		0,1 mg/l				
4,4'- methylenediphenyl diisocyanate 101-68-8	Soil				1 mg/kg		
4,4'- methylenediphenyl diisocyanate 101-68-8	sewage treatment plant (STP)		1 mg/l				
4,4'- methylenediphenyl diisocyanate 101-68-8	Air						no hazard identified
4,4'- methylenediphenyl diisocyanate 101-68-8	Predator						no potential for bioaccumulation
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (intermittent releases)		10 mg/l				
Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2	sewage treatment plant (STP)		6,46 mg/l				
dibutyltin dilaurate 77-58-7	aqua (freshwater)		0,000463 mg/l				
dibutyltin dilaurate 77-58-7	aqua (marine water)					0,0463 µg/l	
dibutyltin dilaurate 77-58-7	aqua (intermittent releases)		0,00463 mg/l				
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	Sewage treatment plant		100 mg/l				
dibutyltin dilaurate	oral				0,2 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Xylene - mixture of isomers 1330-20-7	Workers	inhalation	Long term exposure - systemic effects		221 mg/m3	
Xylene - mixture of isomers 1330-20-7	Workers	inhalation	Acute/short term exposure - systemic effects		442 mg/m3	
Xylene - mixture of isomers 1330-20-7	Workers	inhalation	Long term exposure - local effects		221 mg/m3	
Xylene - mixture of isomers 1330-20-7	Workers	inhalation	Acute/short term exposure - local effects		442 mg/m3	
Xylene - mixture of isomers 1330-20-7	Workers	dermal	Long term exposure - systemic effects		212 mg/kg	
Xylene - mixture of isomers 1330-20-7	General population	inhalation	Long term exposure - systemic effects		65,3 mg/m3	
Xylene - mixture of isomers 1330-20-7	General population	inhalation	Acute/short term exposure - systemic effects		260 mg/m3	
Xylene - mixture of isomers 1330-20-7	General population	inhalation	Long term exposure - local effects		65,3 mg/m3	
Xylene - mixture of isomers 1330-20-7	General population	inhalation	Acute/short term exposure - local effects		260 mg/m3	
Xylene - mixture of isomers 1330-20-7	General population	dermal	Long term exposure - systemic effects		125 mg/kg	
Xylene - mixture of isomers 1330-20-7	General population	oral	Long term exposure - systemic effects		12,5 mg/kg	
4,4'- methylenediphenyl diisocyanate 101-68-8	Workers	inhalation	Long term exposure - local effects		0,05 mg/m3	no hazard identified
4,4'- methylenediphenyl diisocyanate 101-68-8	Workers	inhalation	Acute/short term exposure - local effects		0,1 mg/m3	no hazard identified
4,4'- methylenediphenyl diisocyanate 101-68-8	General population	inhalation	Long term exposure - local effects		0,025 mg/m3	no hazard identified
4,4'- methylenediphenyl diisocyanate 101-68-8	General population	inhalation	Acute/short term exposure - local effects		0,05 mg/m3	no hazard identified
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	
dibutyltin dilaurate 77-58-7	Workers	dermal	Acute/short term exposure - systemic effects		2,08 mg/kg	
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 -		0,16 mg/kg	

			systemic effects			
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	

Biological Exposure Indices:

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
Xylene 1330-20-7	Methylhippuric (toluric) acid (all isomers)	Urine	Sampling time: End of shift.	2.000 mg/l	DE BGW		
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).

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

Appearance	paste pasty white
Odor	characteristic
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	44 °C (111.2 °F); no method
Evaporation rate	No data available / Not applicable
Flammability	
Burning rate	0,26 mm/s
Burning time	580 s
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density (20 °C (68 °F))	1,2 g/cm ³
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (23 °C (73.4 °F); Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable
Solid content	90 %

9.2. Other information

No data available / Not applicable

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

None if used for intended purpose.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

No decomposition if used according to specifications.

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

An allergic reaction cannot be excluded after repeated skin contact.

11.1. Information on toxicological effects**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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Titanium dioxide 13463-67-7	LD50	> 5.000 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
Xylene - mixture of isomeres 1330-20-7	LD50	3.523 mg/kg	rat	EU Method B.1 (Acute Toxicity (Oral))
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- isocyanatosulphonyltolue ne 4083-64-1	LD50	2.600 mg/kg	rat	not specified
dibutyltin dilaurate 77-58-7	LD50	2.071 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)

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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	LD50	> 2.000 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Titanium dioxide 13463-67-7	LD50	>= 10.000 mg/kg	hamster	not specified
Xylene - mixture of isomeres 1330-20-7	LD50	1.700 mg/kg	rabbit	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)
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
Titanium dioxide 13463-67-7	LC50	> 6,82 mg/l	dust	4 h	rat	not specified
Xylene - mixture of isomeres 1330-20-7	LC50	11 mg/l	vapour	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 64742-48-9	mildly irritating		rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Titanium dioxide 13463-67-7	not irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Xylene - mixture of isomeres 1330-20-7	moderately irritating		rabbit	not specified
4,4'- methylenediphenyl diisocyanate 101-68-8	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
dibutyltin dilaurate 77-58-7	corrosive	24 h	rat	other guideline:

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 64742-48-9	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Titanium dioxide 13463-67-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Xylene - mixture of isomeres 1330-20-7	slightly 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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Titanium dioxide 13463-67-7	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Xylene - mixture of isomeres 1330-20-7	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	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)
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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	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 64742-48-9	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	negative	sister chromatid exchange assay in mammalian cells	with and without		OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells)
Titanium dioxide 13463-67-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Titanium dioxide 13463-67-7	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Titanium dioxide 13463-67-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Xylene - mixture of isomers 1330-20-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Xylene - mixture of isomers 1330-20-7	negative	in vitro mammalian chromosome aberration test	with and without		EU Method B.10 (Mutagenicity)
Xylene - mixture of isomers 1330-20-7	negative	sister chromatid exchange assay in mammalian cells	with and without		EU Method B.19 (Sister Chromatid Exchange Assay In Vitro)
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)
4-isocyanatosulphonyltoluene 4083-64-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
4-isocyanatosulphonyltoluene 4083-64-1	negative	in vitro mammalian chromosome aberration test	with and without		not specified

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
Titanium dioxide 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)
Xylene - mixture of isomers 1330-20-7	not carcinogenic	oral: gavage	103 w 5 d/w	rat	male/female	EU Method B.32 (Carcinogenicity Test)
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 64742-48-9	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 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
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	NOAEL >= 3.000 mg/kg	oral: unspecified	90 d	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	NOAEL >= 1.000 mg/kg	oral: unspecified		rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Titanium dioxide 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)
Xylene - mixture of isomeres 1330-20-7	NOAEL 150 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 64742-48-9	0,34 mm ² /s	40 °C	not specified	

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.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	LL50		96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Titanium dioxide 13463-67-7	LC50		48 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Xylene - mixture of isomers 1330-20-7	LC50	2,6 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
4,4'-methylenediphenyl diisocyanate 101-68-8	LC50	> 1.000 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	597 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (Daphnia):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	EL50		48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Titanium dioxide 13463-67-7	EC50		48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Xylene - mixture of isomers 1330-20-7	EC50	3,1 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4,4'-methylenediphenyl diisocyanate 101-68-8	EC50	129,7 mg/l	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
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)
dibutyltin dilaurate 77-58-7	EC50	< 0,463 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to 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.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	EL50		72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	NOELR		72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Titanium dioxide 13463-67-7	EC50		72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Xylene - mixture of isomers 1330-20-7	ErC50	4,36 mg/l	73 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Xylene - mixture of isomers 1330-20-7	EC10	1,9 mg/l	73 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	EC50	> 1.640 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	NOELR	1.640 mg/l	72 h	Scenedesmus subspicatus (new name: 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)
dibutyltin dilaurate 77-58-7	EC50	> 1 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Titanium dioxide 13463-67-7	EC0		24 h	Pseudomonas fluorescens	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test)
Xylene - mixture of isomers 1330-20-7	EC 50	> 1 - 10 mg/l			not specified
4,4'- methylenediphenyl diisocyanate 101-68-8	EC50	> 100 mg/l	3 h	activated sludge	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 77-58-7	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

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Hydrocarbons, C11-C12, isoalkanes, < 2% aromatics 64742-48-9	not readily biodegradable.	aerobic	31,3 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Xylene - mixture of isomers 1330-20-7	readily biodegradable	aerobic	90 %	28 day	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		98 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
dibutyltin dilaurate 77-58-7	not readily biodegradable.	anaerobic	23 %	39 day	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
Xylene - mixture of isomers 1330-20-7	25,9	56 day		Oncorhynchus mykiss	not specified
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

Hazardous substances CAS-No.	LogPow	Temperature	Method
Xylene - mixture of isomers 1330-20-7	3,16	20 °C	not specified
4,4'- methylenediphenyl diisocyanate 101-68-8	4,51	22 °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

Hazardous substances CAS-No.	PBT / vPvB
Titanium dioxide 13463-67-7	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.
Xylene - mixture of isomers 1330-20-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
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.
dibutyltin dilaurate 77-58-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. 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

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.2. UN proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.3. Transport hazard class(es)

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.4. Packing group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

VOC content (VOCV 814.018 VOC regulation CH)	10,9 %
VOC content (2010/75/EU)	10,9 %

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 vapor.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- 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.
- H413 May cause long lasting harmful effects to aquatic life.

Further information:

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