

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

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TEROSON MS 9120 WH

SDS No. : 633731 V008.0 Revision: 14.03.2024 printing date: 18.03.2024 Replaces version from: 08.11.2022

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

- **1.1. Product identifier** TEROSON MS 9120 WH
- **1.2. Relevant identified uses of the substance or mixture and uses advised against** Intended use:

MS Sealant

1.3. Details of the supplier of the safety data sheet Henkel AG & Co. KGaA

Henkelstr. 67 40589 Düsseldorf

Germany

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SDSinfo.Adhesive@henkel.com

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

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Chronic hazards to the aquatic environment H412 Harmful to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):

Hazard statement:	H412 Harmful to aquatic life with long lasting effects.
Supplemental information	Contains: Trimethoxyvinylsilane May produce an allergic reaction. Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.
Precautionary statement: Prevention	P273 Avoid release to the environment.

Category 3

2.3. Other hazards

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

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M- factors and ATEs	Add. Information
Titanium dioxide < 1% particles with diameter ≤ 10 μm 13463-67-7 236-675-5 01-2119489379-17	5-< 10 %			
Trimethoxyvinylsilane 2768-02-7 220-449-8 01-2119513215-52	0,1-< 1 %	Flam. Liq. 3, H226 Acute Tox. 4, Inhalation, H332 Skin Sens. 1B, H317		
methanol 67-56-1 200-659-6 01-2119433307-44	0,1-< 1 %	Flam. Liq. 2, H225 Acute Tox. 3, Inhalation, H331 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Oral, H301 STOT SE 1, H370	STOT SE 1; H370; C >= 10 % STOT SE 2; H371; C 3 - < 10 % ===== dermal:ATE = 300 mg/kg oral:ATE = 300 mg/kg	EU OEL
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9 258-207-9 01-2119537297-32	0,1- < 1 %	Repr. 2, H361f Eye Dam. 1, H318 Aquatic Chronic 2, H411 Aquatic Acute 1, H400	M acute = 1	
ethylenebis(oxyethylene) bis[3- (5-tert-butyl-4-hydroxy-m- tolyl)propionate] 36443-68-2 253-039-2 01-2119956160-44	0,01-< 0,25 %	Aquatic Chronic 1, H410	M chronic = 10	

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:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.

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 No data available.

No data available.

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 self-contained breathing apparatus. Wear protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures Wear protective equipment.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water. Inform authorities in the event of product spillage to water courses or sewage systems.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Hygiene measures:

Wash hands before work breaks and after finishing work. Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction. Temperatures between + 10 $^{\circ}$ C and + 25 $^{\circ}$ C.

7.3. Specific end use(s) MS Sealant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for

Germany

Ingredient [Regulated substance]			Short term exposure limit category / Remarks	Regulatory list	
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
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			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
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
Titanium dioxide 13463-67-7		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
Titanium dioxide 13463-67-7			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
methanol 67-56-1 [Methanol]	200	260	Time Weighted Average (TWA):	Indicative	ECTLV
methanol 67-56-1			Skin designation:	Can be absorbed through the skin.	TRGS 900
methanol 67-56-1	100	130	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
methanol 67-56-1			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
methanol 67-56-1 [Methanol]			Skin designation:	Can be absorbed through the skin.	ECTLV

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment					Remarks	
		F	mg/l	ppm	mg/kg	others	
Trimethoxyvinylsilane	aqua		0,4 mg/l	<u> </u>			
2768-02-7	(freshwater)		-				
Trimethoxyvinylsilane	aqua (marine		0,04 mg/l				
2768-02-7	water)						
Trimethoxyvinylsilane	Freshwater -		1,21 mg/l				
2768-02-7	intermittent						
Trimethoxyvinylsilane	sediment				1,5 mg/kg		
2768-02-7	(freshwater)						
Trimethoxyvinylsilane	sediment				0,15 mg/kg		
2768-02-7	(marine water)						
Trimethoxyvinylsilane	Soil				0,06 mg/kg		
2768-02-7					6 8		
methanol	aqua						no hazard identified
67-56-1	(freshwater)						
methanol	sediment						no hazard identified
67-56-1	(freshwater)						
methanol	aqua (marine						no hazard identified
67-56-1	water)						no nuzuru ruonurrou
methanol	Soil						no hazard identified
67-56-1	5011						no nazaru nentritet
methanol	sewage						no hazard identified
67-56-1	treatment plant						no nazaru identified
07 50 1	(STP)						
methanol	aqua						no hazard identified
67-56-1	(intermittent						no nazaru identified
07-50-1	(interinitient releases)						
methanol	sediment						no hazard identified
67-56-1	(marine water)						no nazaru identified
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	aqua		0,004 mg/l				
52829-07-9	(freshwater)		0,004 mg/1				
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	aqua (marine		0,00038				
52829-07-9	water)		0,00038 mg/l				
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Freshwater -		0,007 mg/l				
52829-07-9	intermittent		0,007 mg/1				
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate					5.0		
52829-07-9	(freshwater)				5,9 mg/kg		
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate			-		0.50		
52829-07-9	(marine water)				0,59 mg/kg		
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate					1 10		
52829-07-9	5011				1,18 mg/kg		
			1 /1				
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	sewage		1 mg/l				
52829-07-9	treatment plant						
Γ_{4}	(STP)		0,001 mg/l	1			
Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-			0,001 mg/l				
4-hydroxy-m-tolyl)propionate]	(freshwater)						
36443-68-2 Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-				1	0.105		
			1		0,195		
4-hydroxy-m-tolyl)propionate]	(freshwater)		1		mg/kg		
36443-68-2	1			+	0.010		
Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-	sediment		1		0,019		
4-hydroxy-m-tolyl)propionate]	(marine water)		1		mg/kg		
36443-68-2	I	I	1	L			

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Trimethoxyvinylsilane 2768-02-7	Workers	dermal	Long term exposure - systemic effects		0,91 mg/kg	
Trimethoxyvinylsilane 2768-02-7	Workers	inhalation	Long term exposure - systemic effects		27,6 mg/m3	
Trimethoxyvinylsilane 2768-02-7	General population	dermal	Long term exposure - systemic effects		0,63 mg/kg	
Trimethoxyvinylsilane 2768-02-7	General population	inhalation	Long term exposure - systemic effects		6,8 mg/m3	
Trimethoxyvinylsilane 2768-02-7	General population	oral	Long term exposure - systemic effects		0,63 mg/kg	
Trimethoxyvinylsilane 2768-02-7	Workers	inhalation	Acute/short term exposure - systemic effects		73,6 mg/m3	
Trimethoxyvinylsilane 2768-02-7	General population	inhalation	Acute/short term exposure - systemic effects		54,4 mg/m3	
Trimethoxyvinylsilane 2768-02-7	Workers	dermal	Long term exposure - local effects			
Trimethoxyvinylsilane 2768-02-7	Workers	dermal	Acute/short term exposure - local effects			
Trimethoxyvinylsilane 2768-02-7	General population	dermal	Long term exposure - local effects			
Trimethoxyvinylsilane 2768-02-7	General population	dermal	Acute/short term exposure - local effects			
methanol 67-56-1	Workers	inhalation	Long term exposure - systemic effects		260 mg/m3	no hazard identified
methanol 67-56-1	Workers	inhalation	Acute/short term exposure - systemic effects		260 mg/m3	no hazard identified
methanol 67-56-1	Workers	inhalation	Long term exposure - local effects		260 mg/m3	no hazard identified
methanol 67-56-1	Workers	inhalation	Acute/short term exposure - local effects		260 mg/m3	no hazard identified
methanol 67-56-1	Workers	dermal	Long term exposure - systemic effects		40 mg/kg	no hazard identified
methanol 67-56-1	Workers	dermal	Acute/short term exposure - systemic effects		40 mg/kg	no hazard identified
methanol 67-56-1	General population	inhalation	Long term exposure - systemic effects		50 mg/m3	no hazard identified
methanol 67-56-1	General population	inhalation	Acute/short term exposure - systemic effects		50 mg/m3	no hazard identified
methanol 67-56-1	General population	inhalation	Long term exposure - local effects		50 mg/m3	no hazard identified
methanol 67-56-1	General population	inhalation	Acute/short term exposure - local effects		50 mg/m3	no hazard identified
methanol 67-56-1	General population	dermal	Long term exposure - systemic effects		8 mg/kg	no hazard identified
methanol 67-56-1	General population	dermal	Acute/short term exposure -		8 mg/kg	no hazard identified

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	I	1	systemic effects		
methanol 67-56-1	General population	oral	Long term exposure - systemic effects	8 mg/kg	no hazard identified
methanol 67-56-1	General population	oral	Acute/short term exposure - systemic effects	8 mg/kg	no hazard identified
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Workers	dermal	Long term exposure - systemic effects	1,8 mg/kg	
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	Workers	Inhalation	Long term exposure - systemic effects	1,27 mg/m3	
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	General population	Inhalation	Long term exposure - systemic effects	0,31 mg/m3	
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	General population	dermal	Long term exposure - systemic effects	0,9 mg/kg	
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	General population	oral	Long term exposure - systemic effects	0,18 mg/kg	

Biological Exposure Indices:

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time		Basis of biol. exposure index	 Additional Information
methanol 67-56-1 [Methanol]	methanol	Urine	Sampling time period is for long-term exposures, at the end of the shift after several preceding ones./ Sampling time period is at end of exposure or at end of shift.	15 mg/l	DE BGW	

8.2. Exposure controls:

Engineering controls: Ensure good ventilation/extraction.

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): Polychloroprene (CR; ≥ 1 mm thickness) or natural rubber (NR; ≥ 1 mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Polychloroprene (CR; ≥ 1 mm thickness) or natural rubber (NR; ≥ 1 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: Protective goggles 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	white
Odor	alcohol-like
Physical state	solid
Melting point	Not applicable, Determination technically not possible
Solidification temperature	Not applicable, Product is a solid.
Initial boiling point	> 280 °C (> 536 °F) Decomposes before boiling point is reached
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)	Reacts with water.
(20 °C (68 °F); Solvent: Water)	
Partition coefficient: n-octanol/water	Not applicable
	Mixture
Vapour pressure	< 0,1 hPa
(20 °C (68 °F))	
Density	1,52 g/cm3
(20 °C (68 °F))	
Bulk density	1,52 g/cm3
Relative vapour density:	Not applicable, Product is a solid.
Particle characteristics	Not applicable, mixture is a paste.

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

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 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
Titanium dioxide < 1% particles with diameter \leq 10 µm 13463-67-7	LD50	> 5.000 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
Trimethoxyvinylsilane 2768-02-7	LD50	6.899 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
methanol 67-56-1	Acute toxicity estimate (ATE)	300 mg/kg		Expert judgement
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	LD50	3.700 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4- hydroxy-m- tolyl)propionate] 36443-68-2	LD50	> 7.000 mg/kg	rat	equivalent or similar to OECD Guideline 423 (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	Value	Species	Method
Titanium dioxide $< 1\%$ particles with diameter $\le 10 \ \mu m$ 13463-67-7	type LD50	>= 10.000 mg/kg	hamster	not specified
Trimethoxyvinylsilane 2768-02-7	LD50	3.158 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
methanol 67-56-1	Acute toxicity estimate (ATE)	300 mg/kg		Expert judgement
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	LD50	> 3.170 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4- hydroxy-m- tolyl)propionate] 36443-68-2	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (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	Test atmosphere	Exposure time	Species	Method
Titanium dioxide $< 1\%$ particles with diameter $\le 10 \ \mu m$ 13463-67-7	LC50	> 6,82 mg/l	dust	4 h	rat	not specified
Trimethoxyvinylsilane 2768-02-7	LC50	16,8 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)

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
Titanium dioxide < 1% particles with diameter \leq 10 μ m 13463-67-7	not irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Trimethoxyvinylsilane 2768-02-7	not irritating		rabbit	other guideline:
methanol 67-56-1	not irritating	20 h	rabbit	BASF Test
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	not irritating	24 h	rabbit	EPA OPP 81-5 (Acute Dermal Irritation)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4- hydroxy-m- tolyl)propionate] 36443-68-2	not irritating	24 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

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

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Titanium dioxide $< 1\%$ particles with diameter $\le 10 \ \mu m$ 13463-67-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Trimethoxyvinylsilane 2768-02-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
methanol 67-56-1	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	corrosive	24 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4- hydroxy-m- tolyl)propionate] 36443-68-2	not 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
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)
Trimethoxyvinylsilane 2768-02-7	sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
methanol 67-56-1	not sensitising	Guinea pig maximisation test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4- hydroxy-m- tolyl)propionate] 36443-68-2	not sensitising	Guinea pig maximisation test	guinea pig	equivalent or similar to 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
Titanium dioxide $< 1\%$ particles with diameter $\le 10 \ \mu m$ 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 \leq 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 \leq 10 μ m 13463-67-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Trimethoxyvinylsilane 2768-02-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Trimethoxyvinylsilane 2768-02-7	positive	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Trimethoxyvinylsilane 2768-02-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
methanol 67-56-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
methanol 67-56-1	negative	in vitro mammalian cell micronucleus test	without		not specified
methanol 67-56-1	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation 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
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)
methanol 67-56-1	not carcinogenic	inhalation: vapour	18 m 19 h/d	mouse	male/female	equivalent or similar 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
Titanium dioxide $< 1\%$ particles with diameter $\le 10 \ \mu m$ 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)
Trimethoxyvinylsilane 2768-02-7	NOAEL P 250 mg/kg	one- generation study	oral: gavage	rat	OECD Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test (Precursor Protocol of GL 422)
Trimethoxyvinylsilane 2768-02-7	NOAEL P 1.000 mg/kg	one- generation study	oral: gavage	rat	OECD Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test (Precursor Protocol of GL 422)
Trimethoxyvinylsilane 2768-02-7	NOAEL F1 1.000 mg/kg	one- generation study	oral: gavage	rat	OECD Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test (Precursor Protocol of GL 422)
methanol 67-56-1	NOAEL P 1,3 mg/l NOAEL F1 0,13 mg/l NOAEL F2 0,13 mg/l	Two generation study	inhalation	rat	equivalent or similar to OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	NOAEL P 109 mg/kg NOAEL F1 121 mg/kg	two- generation study	oral: feed	rat	OECD Guideline 443 (Extended One-Generation Reproductive Toxicity Study)

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
Titanium dioxide < 1% particles with diameter \leq 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)
Trimethoxyvinylsilane 2768-02-7	NOAEL 62,5 mg/kg	oral: gavage	42d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Trimethoxyvinylsilane 2768-02-7	NOAEL 0,605 mg/l	inhalation: vapour	5 days/week for 14 weeks 6 hours/day	rat	not specified
Trimethoxyvinylsilane 2768-02-7	NOAEL 50 mg/kg	oral: gavage	28 d daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
methanol 67-56-1	NOAEL 6,63 mg/l	inhalation: vapour	4 weeks 6 h/d, 5 d/w	rat	equivalent or similar to OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)
methanol 67-56-1	NOAEL 0,13 mg/l	inhalation: vapour	12 m 20 h/d	rat	equivalent or similar to OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	NOAEL 36 mg/kg	oral: feed	daily	rat	other guideline:

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

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

12.1. Toxicity

Toxicity (Fish):

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

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type		-	-	
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 μ m 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)
Trimethoxyvinylsilane 2768-02-7	LC50	191 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
methanol 67-56-1	LC50	15.400 mg/l	96 h	Lepomis macrochirus	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates and Amphibians)
methanol 67-56-1	NOEC	7.900 mg/l	200 h	Oryzias latipes	OECD Guideline 210 (fish early lite stage toxicity test)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	LC50	4,4 mg/l	96 h	Lepomis macrochirus	OECD Guideline 203 (Fish, Acute Toxicity Test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy- m-tolyl)propionate] 36443-68-2	LC50	Toxicity > Water solubility	96 h	Lepomis macrochirus	OECD Guideline 203 (Fish, Acute Toxicity Test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy- m-tolyl)propionate] 36443-68-2	NOEC	0,0088 mg/l	32 d	Pimephales promelas	OECD Guideline 210 (fish early lite stage 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	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Titanium dioxide $< 1\%$ particles with diameter ≤ 10 µm 13463-67-7	EC50	Toxicity > Water solubility	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Trimethoxyvinylsilane 2768-02-7	EC50	168,7 mg/l	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
methanol 67-56-1	EC50	18.260 mg/l	96 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	EC50	8,58 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy- m-tolyl)propionate] 36443-68-2	EC50	Toxicity > Water solubility	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
Trimethoxyvinylsilane 2768-02-7	NOEC	28,1 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	NOEC	0,23 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy- m-tolyl)propionate] 36443-68-2	NOEC	0,0055 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	Value	Value	Exposure time	Species	Method
CAS-No.	type		-		
Titanium dioxide $< 1\%$ particles with diameter ≤ 10 μ m 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 μ m 13463-67-7	NOEC	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Trimethoxyvinylsilane 2768-02-7	EC50	> 957 mg/l	72 h	Desmodesmus subspicatus	EU Method C.3 (Algal Inhibition test)
Trimethoxyvinylsilane 2768-02-7	NOEC	957 mg/l	72 h	Desmodesmus subspicatus	EU Method C.3 (Algal Inhibition test)
methanol 67-56-1	EC50	22.000 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	EC50	0,705 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	EC10	0,188 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy- m-tolyl)propionate] 36443-68-2	EC50	Toxicity > Water solubility	72 h	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)	EU Method C.3 (Algal Inhibition test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy- m-tolyl)propionate] 36443-68-2	EC10	Toxicity > Water solubility	72 h	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)	EU Method C.3 (Algal 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	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Titanium dioxide < 1%	EC50	Toxicity > Water	3 h	activated sludge	ISO 8192 (Test for
particles with diameter ≤ 10		solubility			Inhibition of Oxygen
μm					Consumption by Activated
13463-67-7					Sludge)
Trimethoxyvinylsilane	EC50	> 100 mg/l	3 h	activated sludge of a	OECD Guideline 209
2768-02-7				predominantly domestic sewage	(Activated Sludge,
					Respiration Inhibition Test)
methanol	IC50	> 1.000 mg/l	3 h	activated sludge of a	OECD Guideline 209
67-56-1				predominantly domestic sewage	(Activated Sludge,
					Respiration Inhibition Test)
Bis(2,2,6,6-tetramethyl-4-	EC50	> 100 mg/l	3 h	activated sludge, domestic	OECD Guideline 209
piperidyl) sebacate					(Activated Sludge,
52829-07-9					Respiration Inhibition Test)
ethylenebis(oxyethylene)	IC50	Toxicity > Water	3 h	activated sludge, domestic	OECD Guideline 209
bis[3-(5-tert-butyl-4-hydroxy-		solubility			(Activated Sludge,
m-tolyl)propionate]					Respiration Inhibition Test)
36443-68-2					

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
Trimethoxyvinylsilane 2768-02-7	not readily biodegradable.	aerobic	51 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
methanol 67-56-1	readily biodegradable	aerobic	82 - 92 %	30 d	EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test)
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	not readily biodegradable.	aerobic	24 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy- m-tolyl)propionate] 36443-68-2	not readily biodegradable.	aerobic	8 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

12.3. Bioaccumulative potential

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

Hazardous substances CAS-No.	Bioconcentratio n factor (BCF)	Exposure time	Temperature	Species	Method
methanol 67-56-1	< 10	72 h		Leuciscus idus melanotus	not specified
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy- m-tolyl)propionate] 36443-68-2	> 0,11 - 2,45	56 d		Cyprinus carpio	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)

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
methanol 67-56-1	-0,77		other guideline:
Bis(2,2,6,6-tetramethyl-4- piperidyl) sebacate 52829-07-9	0,35	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy- m-tolyl)propionate] 36443-68-2	4,7	23 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

12.5. Results of PBT and vPvB assessment

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

Hazardous substances	PBT / vPvB
CAS-No.	
Titanium dioxide < 1% particles with diameter	According to Annex XIII to Regulation (EC) No 1907/2006, a PBT and vPvB assessment shall
$\leq 10 \mu m$	not be conducted for inorganic substances.
13463-67-7	
Trimethoxyvinylsilane	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
2768-02-7	Bioaccumulative (vPvB) criteria.
methanol	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
67-56-1	Bioaccumulative (vPvB) criteria.
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
52829-07-9	Bioaccumulative (vPvB) criteria.
ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
hydroxy-m-tolyl)propionate]	Bioaccumulative (vPvB) criteria.
36443-68-2	

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): Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): Persistent organic pollutants (Regulation (EU) 2019/1021): VOC content 1,6 % (2010/75/EU)

Not applicable Not applicable Not applicable

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

National regulations/information (Germany):

WGK:	WGK 2: significantly water endangering (Ordinance on facilities for handling substances that are hazardous to water (AwSV)) Classification according to AwSV, Annex 1 (5.2)
Storage class according to TRGS 510:	11

Storage class according to TRGS 510:

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: H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

H361f Suspected of damaging fertility.

H370 Causes damage to organs.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic 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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