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

SDS No. : 152777
V012.0

LOCTITE SI 5083 LC known as LOCTITE 5083 NUVASIL FLW

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

1.1. Product identifier

LOCTITE SI 5083 LC known as LOCTITE 5083 NUVASIL FLW
UFI: 9PKT-QWU5-E201-RJY7

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

Intended use:
Silicone sealant

1.3. Details of the supplier of the safety data sheet

Henkel Ltd
Adhesives
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

SDSinfo.Adhesive@henkel.com
For Safety Data Sheet updates please visit our website www.mysds.henkel.com or www.henkel-adhesives.com.

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

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.	
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 Silica, surface treated with Hexamethyldisilazane - Nano

Signal word:	Warning
Hazard statement:	H315 Causes skin irritation. H319 Causes serious eye irritation. H373 May cause damage to organs through prolonged or repeated exposure.
Supplemental information	Contains: dibutyltin dilaurate May produce an allergic reaction.
Precautionary statement: **Response**	P302+P352 IF ON SKIN: Wash with plenty of soap and water. P337+P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

None if used properly.
Self-classification according to Article 12(b) of (EU) 1272/2008.

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):

octamethylcyclotetrasiloxane 556-67-2	PBT/vPvB

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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9 231-545-4 01-2119379499-16	25- < 50 %	STOT RE 2, Inhalation, H373	dermal:ATE = > 5.000 mg/kg oral:ATE = > 5.000 mg/kg inhalation:ATE = > 5,01 mg/l;dust/mist	
Methacryloxypropyltriacetoxysilane 51772-85-1 257-407-3 01-2120767931-45	1- < 3 %	Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335		
2,2-Diethoxyacetophenone 6175-45-7 228-220-4	1- < 5 %	Eye Irrit. 2, H319		
Acetic anhydride 108-24-7 203-564-8 01-2119486470-36	0,1- < 1 %	Flam. Liq. 3, H226 Acute Tox. 3, Inhalation, H331 Skin Corr. 1B, H314 Acute Tox. 4, Oral, H302	Skin Corr. 1B; H314; C >= 25 % Eye Dam. 1; H318; C 5 - < 25 % Eye Irrit. 2; H319; C 1 - < 5 % STOT SE 3; H335; C >= 5 % Skin Irrit. 2; H315; C 5 - < 25 %	
dibutyltin dilaurate 77-58-7 201-039-8 01-2119496068-27	0,1- < 0,25 %	Eye Irrit. 2, H319 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	M acute = 1 M chronic = 1	
octamethylcyclotetrasiloxane 556-67-2 209-136-7 01-2119529238-36	0,01- < 0,1 %	Aquatic Chronic 1, H410 Repr. 2, H361f Flam. Liq. 3, H226	M chronic = 10	SVHC PBT/vPvB

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. If symptoms persist, seek medical advice.

Skin contact:
Rinse with running water and soap.
Obtain medical attention if irritation persists.

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
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:
water, carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:
High pressure waterjet

5.2. Special hazards arising from the substance or mixture
In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.
Silicon dioxide

5.3. Advice for firefighters
Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:
In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid contact with skin and eyes.
Wear protective equipment.
Ensure adequate ventilation.
Avoid dust formation.

6.2. Environmental precautions
Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up
Dispose of contaminated material as waste according to Section 13.
Scrape up as much material as possible.
Sweep up spilled material. Avoid creating dust.
Store in a partly filled, closed container until disposal.

6.4. Reference to other sections
See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid skin and eye contact.
See advice in section 8

Hygiene measures:
Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.
Good industrial hygiene practices should be observed.

7.2. Conditions for safe storage, including any incompatibilities
Store in a cool, well-ventilated place.
Refer to Technical Data Sheet.
Never allow product to get in contact with water during storage

7.3. Specific end use(s)
Silicone sealant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m^3	Value type	Short term exposure limit category / Remarks	Regulatory list
Acetic anhydride 108-24-7 [ACETIC ANHYDRIDE]	0,5	2,5	Time Weighted Average (TWA):		EH40 WEL
Acetic anhydride 108-24-7 [ACETIC ANHYDRIDE]	2	10	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
Dibutyltin dilaurate 77-58-7 [TIN COMPOUNDS, ORGANIC, EXCEPT CYHEXATIN (ISO), (AS SN)]		0,1	Time Weighted Average (TWA):		EH40 WEL
Dibutyltin dilaurate 77-58-7 [TIN COMPOUNDS, ORGANIC, EXCEPT CYHEXATIN (ISO), (AS SN)]			Skin designation:	Can be absorbed through the skin.	EH40 WEL
Dibutyltin dilaurate 77-58-7 [TIN COMPOUNDS, ORGANIC, EXCEPT CYHEXATIN (ISO), (AS SN)]		0,2	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m^3	Value type	Short term exposure limit category / Remarks	Regulatory list
Acetic anhydride 108-24-7 [ACETIC ANHYDRIDE]	1	2,5	Time Weighted Average (TWA):		IR_OEL
Acetic anhydride 108-24-7 [ACETIC ANHYDRIDE]	3	10	Short Term Exposure Limit (STEL):	15 minutes	IR_OEL
Dibutyltin dilaurate 77-58-7 [TIN, ORGANIC COMPOUNDS]		0,2	Short Term Exposure Limit (STEL):	15 minutes Indicative OELV	IR_OEL
Dibutyltin dilaurate 77-58-7 [TIN, ORGANIC COMPOUNDS]		0,1	Time Weighted Average (TWA):	Indicative OELV	IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
3-[Tris(acetoxy)silyl]propyl methacrylate 51772-85-1	aqua (freshwater)		0,45 mg/l				
3-[Tris(acetoxy)silyl]propyl methacrylate 51772-85-1	Freshwater - intermittent		4,5 mg/l				
3-[Tris(acetoxy)silyl]propyl methacrylate 51772-85-1	aqua (marine water)		0,045 mg/l				
3-[Tris(acetoxy)silyl]propyl methacrylate 51772-85-1	sewage treatment plant (STP)		83 mg/l				
3-[Tris(acetoxy)silyl]propyl methacrylate 51772-85-1	sediment (freshwater)				1,8 mg/kg		
3-[Tris(acetoxy)silyl]propyl methacrylate 51772-85-1	sediment (marine water)				0,18 mg/kg		
3-[Tris(acetoxy)silyl]propyl methacrylate 51772-85-1	Soil				0,092 mg/kg		
3-[Tris(acetoxy)silyl]propyl methacrylate 51772-85-1	Predator						no potential for bioaccumulation
Acetic anhydride 108-24-7	aqua (freshwater)		3,058 mg/l				
Acetic anhydride 108-24-7	aqua (marine water)		0,306 mg/l				
Acetic anhydride 108-24-7	sewage treatment plant (STP)		115 mg/l				
Acetic anhydride 108-24-7	sediment (freshwater)				11,36 mg/kg		
Acetic anhydride 108-24-7	sediment (marine water)				1,136 mg/kg		
Acetic anhydride 108-24-7	Soil				0,47 mg/kg		
Acetic anhydride 108-24-7	aqua (intermittent releases)		30,58 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 77-58-7	oral				0,2 mg/kg		
Octamethylcyclotetrasiloxane 556-67-2	aqua (freshwater)		0,0015 mg/l				
Octamethylcyclotetrasiloxane 556-67-2	aqua (marine water)		0,00015 mg/l				
Octamethylcyclotetrasiloxane 556-67-2	sewage treatment plant (STP)		10 mg/l				
Octamethylcyclotetrasiloxane 556-67-2	sediment (freshwater)				3 mg/kg		
Octamethylcyclotetrasiloxane 556-67-2	sediment (marine water)				0,3 mg/kg		
Octamethylcyclotetrasiloxane 556-67-2	oral				41 mg/kg		
Octamethylcyclotetrasiloxane 556-67-2	Soil				0,84 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	inhalation	Long term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	inhalation	Long term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	inhalation	Acute/short term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	inhalation	Acute/short term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	dermal	Long term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	dermal	Acute/short term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	dermal	Long term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	dermal	Acute/short term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	inhalation	Long term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	inhalation	Acute/short term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	inhalation	Long term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	inhalation	Acute/short term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	dermal	Long term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	dermal	Acute/short term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	dermal	Long term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	dermal	Acute/short term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	oral	Long term exposure - systemic effects			

Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	oral	Acute/short term exposure - systemic effects			
Acetic anhydride 108-24-7	Workers	inhalation	Long term exposure - systemic effects		4,2 mg/m3	
Acetic anhydride 108-24-7	Workers	inhalation	Long term exposure - local effects		4,2 mg/m3	
Acetic anhydride 108-24-7	Workers	inhalation	Acute/short term exposure - local effects		12,6 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 - 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	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Long term exposure - systemic effects		73 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Long term exposure - local effects		73 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Long term exposure - systemic effects		13 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Long term exposure - local effects		13 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	oral	Long term exposure - systemic effects		3,7 mg/kg	

Biological Exposure Indices:
None

8.2. Exposure controls:

Engineering controls:
Ensure good ventilation/extraction.

Respiratory protection:
Ensure adequate ventilation.
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area
Dust mask, P2 particle filter.

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:
Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.
Protective eye equipment should conform to EN166.

Skin protection:
Wear suitable protective clothing.
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:
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	solid
Colour	transparent
Odor	Acetic acid
Physical state	solid
Melting point	> 400 °C (> 752 °F)
Solidification temperature	Not applicable, Product is a solid.
Initial boiling point	> 145 °C (> 293 °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	> 100 °C (> 212 °F); Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH (20 °C (68 °F); Conc.: 100 % product; Solvent: None)	7 - 9
Viscosity (kinematic)	Not applicable, Product is a solid.
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Polymerises in presence of water.
Solubility (qualitative) (Solvent: Acetone)	Not determined
Partition coefficient: n-octanol/water	Not applicable Mixture
Vapour pressure (21 °C (69.8 °F))	< 13 mbar
Vapour pressure (21 °C (69.8 °F))	< 10 mm hg
Density	1,1000 g/cm3 None

(20 °C (68 °F))	
Bulk density	1,60 - 1,70 g/cm3
Relative vapour density:	Not applicable, Product is a solid.
Particle characteristics	Maximum grain size <= 0,15 mm LCT STM 744; Particle size determination

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity
Reacts with oxidants, acids and lyes

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
Stable under normal conditions of storage and use.
Excessive heat.

10.5. Incompatible materials
See section reactivity.

10.6. Hazardous decomposition products
None if used for intended purpose.

SECTION 11: Toxicological information

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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	Acute toxicity estimate (ATE)	> 5.000 mg/kg		Expert judgement
Methacryloxypropyltriacetoxysilane 51772-85-1	LD50	> 5.000 mg/kg	not specified	not specified
2,2-Diethoxyacetophenone 6175-45-7	LD50	5.660 mg/kg	rat	not specified
Acetic anhydride 108-24-7	LD50	630 mg/kg	rat	BASF Test
dibutyltin dilaurate 77-58-7	LD50	2.071 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
octamethylcyclotetrasiloxane 556-67-2	LD50	> 4.800 mg/kg	rat	equivalent or similar to 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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	LD50	> 5.000 mg/kg	rabbit	not specified
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	Acute toxicity estimate (ATE)	> 5.000 mg/kg		Expert judgement
2,2-Diethoxyacetophenone 6175-45-7	LD50	11.300 mg/kg	rat	not specified
Acetic anhydride 108-24-7	LD50	4.000 mg/kg	rabbit	not specified
dibutyltin dilaurate 77-58-7	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
octamethylcyclotetrasiloxane 556-67-2	LD50	> 2.375 mg/kg	rat	equivalent or similar to 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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	LC50	> 5,01 mg/l	dust/mist	4 h	rat	OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	Acute toxicity estimate (ATE)	> 5,01 mg/l	dust/mist			Expert judgement
octamethylcyclotetrasiloxane 556-67-2	LC50	36 mg/l	dust/mist	4 h	rat	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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Methacryloxypropyltriacetoxysilane 51772-85-1	Category 1B (corrosive)	3 min	rabbit	equivalent or similar to 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)
octamethylcyclotetrasiloxane 556-67-2	not irritating		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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Acetic anhydride 108-24-7	highly irritating		rabbit	not specified
dibutyltin dilaurate 77-58-7	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
octamethylcyclotetrasiloxane 556-67-2	not irritating		rabbit	equivalent or similar to 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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	not 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)
octamethylcyclotetrasiloxane 556-67-2	not sensitising	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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	negative	bacterial reverse mutation assay (e.g Ames test)			OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	negative	in vitro mammalian chromosome aberration test			OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	negative	mammalian cell gene mutation assay			OECD Guideline 490 (In Vitro Mammalian Cell Gene Mutation Tests Using the Thymidine Kinase Gene)
Acetic anhydride 108-24-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
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)
octamethylcyclotetrasiloxane 556-67-2	negative	bacterial gene mutation assay	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
octamethylcyclotetrasiloxane 556-67-2	negative	in vitro mammalian chromosome aberration test	with and without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
octamethylcyclotetrasiloxane 556-67-2	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	negative	oral: gavage		rat	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
dibutyltin dilaurate 77-58-7	positive	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
octamethylcyclotetrasiloxane 556-67-2	negative	inhalation		rat	equivalent or similar to OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
octamethylcyclotetrasiloxane 556-67-2	negative	oral: gavage		rat	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)

Carcinogenicity

No data available.

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
octamethylcyclotetrasiloxane 556-67-2	NOAEL P 300 ppm NOAEL F1 300 ppm	two-generation study	inhalation	rat	equivalent or similar to OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)

STOT-single exposure:

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

Hazardous substances CAS-No.	Assessment	Route of exposure	Target Organs	Remarks
Methacryloxypropyltriacetoxysilane 51772-85-1	May cause respiratory irritation.			

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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	NOAEL 491,5 mg/kg	oral: feed	6 months daily	rat	not specified
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	NOAEL 0,01 mg/kg	inhalation: dust	12 months 6 h/d, 5 d/wk	rat	not specified
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	NOAEL 0,01 mg/kg	inhalation: dust	12 months 6 h/d, 5 d/wk	monkey	not specified
octamethylcyclotetrasiloxane 556-67-2	LOAEL 35 ppm	inhalation	6 h nose only inhalation 5 days/week for 13 weeks	rat	OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)
octamethylcyclotetrasiloxane 556-67-2	NOAEL 960 mg/kg	dermal	3 w 5 d/w	rabbit	equivalent or similar to OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

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 / surface water / ground water.
Self-classification according to Article 12(b) of (EU) 1272/2008.

12.1. Toxicity

Toxicity (Fish):

NOEC (fish) > 1 mg/l (expert judgement)
LC50 (fish) > 100 mg/l (expert judgement)

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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	LC50	> 10.000 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Methacryloxypropyltriacetoxy silane 51772-85-1	LC50	> 1.042 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	EU Method C.1 (Acute Toxicity for Fish)
Acetic anhydride 108-24-7	LC50	265 mg/l	48 h	Leuciscus idus	DIN 38412-15
dibutyltin dilaurate 77-58-7	LC50	3,1 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
octamethylcyclotetrasiloxane 556-67-2	NOEC	0,0044 mg/l	93 d	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OPPTS 797.1600 (Fish Early Life Stage Toxicity Test)
octamethylcyclotetrasiloxane 556-67-2	LC50	Toxicity > Water solubility	96 h	Oncorhynchus mykiss	EPA OTS 797.1400 (Fish Acute Toxicity Test)

Toxicity (aquatic invertebrates):

EC50 (dafnia) >100 mg/l (OECD 211)

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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	EC50	> 1.000 mg/l	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methacryloxypropyltriacetoxy silane 51772-85-1	EC50	> 876 mg/l	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
Acetic anhydride 108-24-7	EC50	3.200 mg/l	24 h	Daphnia magna	not specified
dibutyltin dilaurate 77-58-7	EC50	0,463 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
octamethylcyclotetrasiloxane 556-67-2	EC50	Toxicity > Water solubility	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)

Chronic toxicity (aquatic invertebrates):

NOEC (dafnia) > 1 mg/l (OECD 211)

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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	NOEC	132,7 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

octamethylcyclotetrasiloxane 556-67-2	NOEC	7.9 µg/l	21 d	Daphnia magna	EPA OTS 797.1330 (Daphnid Chronic Toxicity Test)

Toxicity (Algae):

EC50 (Algae) > 100 mg/l (OECD 201)
NOEC (Algae) > 1 mg/l (OECD 201)

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**
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	EC50	> 173,1 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	NOEC	173,1 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacryloxypropyltriacetoxy silane 51772-85-1	EC50	> 536 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Methacryloxypropyltriacetoxy silane 51772-85-1	EC10	503 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
dibutyltin dilaurate 77-58-7	EC50	> 1 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
octamethylcyclotetrasiloxane 556-67-2	EC50	Toxicity > Water solubility	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
octamethylcyclotetrasiloxane 556-67-2	EC10	0,022 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)

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**
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	EC50	> 2.500 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Methacryloxypropyltriacetoxy silane 51772-85-1	EC50	> 1.000 mg/l	3 h	activated sludge of a predominantly domestic sewage	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)
octamethylcyclotetrasiloxane 556-67-2	EC50	Toxicity > Water solubility	3 h	activated sludge	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)

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
Methacryloxypropyltriacetoxy silane 51772-85-1	readily biodegradable, but failing 10-day window	aerobic	69 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Acetic anhydride 108-24-7		aerobic	99 %		EU Method C.4-F (Determination of the "Ready" BiodegradabilityMITI Test)
Acetic anhydride 108-24-7	inherently biodegradable	aerobic	> 95 %	5 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Acetic anhydride 108-24-7	readily biodegradable	aerobic	96 %	20 d	other guideline:
dibutyltin dilaurate 77-58-7	not readily biodegradable.	anaerobic	23 %	39 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
octamethylcyclotetrasiloxane 556-67-2	not readily biodegradable.	aerobic	3,7 %	29 d	OECD Guideline 310 (Ready BiodegradabilityCO2 in Sealed Vessels (Headspace 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
dibutyltin dilaurate 77-58-7	31 - 155			Cyprinus carpio	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
octamethylcyclotetrasiloxane 556-67-2	12.400	28 d		Pimephales promelas	EPA OTS 797.1520 (Fish Bioconcentration Test-Rainbow Trout)

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
Acetic anhydride 108-24-7	-0,58		not specified
dibutyltin dilaurate 77-58-7	4,44	20,8 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
octamethylcyclotetrasiloxane 556-67-2	6,98	21,7 °C	other guideline:

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
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Methacryloxypropyltriacetoxysilane 51772-85-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Acetic anhydride 108-24-7	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.
octamethylcyclotetrasiloxane 556-67-2	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:
Do not empty into drains / surface water / ground water.
Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:
After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09* waste adhesives and sealants containing organic solvents and other dangerous substances
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.

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 2024/590):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	dibutyltin dilaurate CAS 77-58-7
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EC)	< 5 %

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

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.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H360FD May damage fertility. May damage the unborn child.
H361f Suspected of damaging fertility.
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.

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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