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

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V004.0
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LOCTITE SI 5300 RD

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

1.1. Product identifier
LOCTITE SI 5300 RD

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use:
Silicone adhesive

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
Fax-no.: +44 (1442) 278071

ua-productsafety.uk@henkel.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 damage	Category 1
H318 Causes serious eye damage.	
Chronic hazards to the aquatic environment	Category 3
H412 Harmful to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains Methyltriacetoxysilane

Signal word:	Danger
Hazard statement:	H315 Causes skin irritation. H318 Causes serious eye damage. H412 Harmful to aquatic life with long lasting effects.
Precautionary statement: Prevention	P273 Avoid release to the environment. P280 Wear eye protection/face protection.
Precautionary statement: Response	P302+P352 IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards
None if used properly.
This mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).
Evolves acetic acid during cure.

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.	content	Classification
Methyltriacetoxysilane 4253-34-3	224-221-9 01-2119962266-32 01-2119987097-22	1- < 5 %	Skin Corr. 1C H314 Eye Dam. 1 H318 Acute Tox. 4; Oral H302
octamethylcyclotetrasiloxane 556-67-2	209-136-7 01-2119529238-36	0,1- < 0,25 %	Flam. Liq. 3 H226 Repr. 2 H361f Aquatic Chronic 1 H410 ===== EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC) M factor (Chron Aquat Tox): 10
Dodecamethylcyclohexasiloxane 540-97-6	208-762-8 01-2119517435-42	0,1- < 1 %	Aquatic Chronic 4 H413 ===== EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC)
Decamethylcyclopentasiloxane 541-02-6	208-764-9 01-2119511367-43	0,1- < 1 %	Aquatic Chronic 4 H413 ===== EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC)

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:
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.

After eye contact: Corrosive, may cause permanent damage to eyes (impairment of vision).

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) and carbon dioxide (CO2) can be released.
Silicon dioxide
In case of fire, keep containers cool with water spray.

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

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.
Remove sources of ignition.

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

6.3. Methods and material for containment and cleaning up
For small spills wipe up with paper towel and place in container for disposal.
For large spills absorb onto inert absorbent material and place in sealed container for disposal.
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
Avoid skin and eye contact.
See advice in section 8

Hygiene measures:
Good industrial hygiene practices should be observed.
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.
Keep container tightly sealed.
Refer to Technical Data Sheet

7.3. Specific enduse(s)
Silicone adhesive

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
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [SILICA, AMORPHOUS, RESPIRABLE DUST]		2,4	Time Weighted Average (TWA):		EH40 WEL
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [SILICA, AMORPHOUS, INHALABLE DUST]		6	Time Weighted Average (TWA):		EH40 WEL
Diiron trioxide 1309-37-1 [ROUGE, RESPIRABLE]		4	Time Weighted Average (TWA):		EH40 WEL
Diiron trioxide 1309-37-1 [ROUGE, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL
Diiron trioxide 1309-37-1 [IRON OXIDE, FUME (AS FE)]		5	Time Weighted Average (TWA):		EH40 WEL
Diiron trioxide 1309-37-1 [IRON OXIDE, FUME (AS FE)]		10	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
Acetic acid 64-19-7 [ACETIC ACID]	10	25	Time Weighted Average (TWA):	Indicative	ECTLV
Acetic acid 64-19-7 [ACETIC ACID]	20	50	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Acetic acid 64-19-7 [ACETIC ACID]	10	25	Time Weighted Average (TWA):		EH40 WEL
Acetic acid 64-19-7 [ACETIC ACID]	20	50	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
Diiron trioxide 1309-37-1 [IRON OXIDE]		5	Time Weighted Average (TWA):		IR_OEL
Diiron trioxide 1309-37-1 [ROUGE RESPIRABLE DUST]		4	Time Weighted Average (TWA):		IR_OEL
Diiron trioxide 1309-37-1 [IRON OXIDE]		10	Short Term Exposure Limit (STEL):	15 minutes	IR_OEL
Diiron trioxide 1309-37-1 [ROUGE]		10	Time Weighted Average (TWA):		IR_OEL
Acetic acid 64-19-7 [ACETIC ACID]	10	25	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Acetic acid 64-19-7 [ACETIC ACID]	10	25	Time Weighted Average (TWA):	Indicative	ECTLV
Acetic acid 64-19-7	20	50	Short Term Exposure Limit (STEL):	Indicative	ECTLV

[ACETIC ACID]					
Acetic acid 64-19-7 [ACETIC ACID]	20	50	Short Term Exposure Limit (STEL):	15 minutes Indicative OELV	IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Methylsilanetriyl triacetate 4253-34-3	aqua (freshwater)		1,0 mg/l				
Methylsilanetriyl triacetate 4253-34-3	aqua (marine water)		0,1 mg/l				
Methylsilanetriyl triacetate 4253-34-3	aqua (intermittent releases)		10 mg/l				
Methylsilanetriyl triacetate 4253-34-3	sediment (freshwater)				0,80 mg/kg		
Methylsilanetriyl triacetate 4253-34-3	sediment (marine water)				0,08 mg/kg		
Methylsilanetriyl triacetate 4253-34-3	Soil				0,13 mg/kg		
Methylsilanetriyl triacetate 4253-34-3	sewage treatment plant (STP)		> 10 mg/l				
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				0,54 mg/kg		
Dodecamethylcyclohexasiloxane 540-97-6	sewage treatment plant (STP)		1 mg/l				
Dodecamethylcyclohexasiloxane 540-97-6	sediment (freshwater)				13 mg/kg		
Dodecamethylcyclohexasiloxane 540-97-6	Soil				3,77 mg/kg		
Dodecamethylcyclohexasiloxane 540-97-6	oral				66,7 mg/kg		
Dodecamethylcyclohexasiloxane 540-97-6	sediment (marine water)				1,3 mg/kg		
Decamethylcyclopentasiloxane 541-02-6	aqua (freshwater)		0,0012 mg/l				
Decamethylcyclopentasiloxane 541-02-6	aqua (marine water)		0,00012 mg/l				
Decamethylcyclopentasiloxane 541-02-6	sewage treatment plant (STP)		10 mg/l				
Decamethylcyclopentasiloxane 541-02-6	sediment (freshwater)				11 mg/kg		
Decamethylcyclopentasiloxane 541-02-6	Soil				2,54 mg/kg		
Decamethylcyclopentasiloxane 541-02-6	oral				16 mg/kg		
Decamethylcyclopentasiloxane 541-02-6	sediment (marine water)				1,1 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Methylsilanetriyl triacetate 4253-34-3	Workers	inhalation	Long term exposure - systemic effects		25 mg/m3	
Methylsilanetriyl triacetate 4253-34-3	Workers	inhalation	Acute/short term exposure - systemic effects		25 mg/m3	
Methylsilanetriyl triacetate 4253-34-3	Workers	dermal	Long term exposure - systemic effects		14,5 mg/kg	
Methylsilanetriyl triacetate 4253-34-3	Workers	dermal	Acute/short term exposure - systemic effects		14,5 mg/kg	
Methylsilanetriyl triacetate 4253-34-3	General population	inhalation	Long term exposure - local effects		5,1 mg/m3	
Methylsilanetriyl triacetate 4253-34-3	General population	inhalation	Acute/short term exposure - local effects		5,1 mg/m3	
Methylsilanetriyl triacetate 4253-34-3	General population	dermal	Long term exposure - systemic effects		7,2 mg/kg	
Methylsilanetriyl triacetate 4253-34-3	General population	dermal	Acute/short term exposure - systemic effects		7,2 mg/kg	
Methylsilanetriyl triacetate 4253-34-3	General population	oral	Long term exposure - systemic effects		1 mg/kg	
Methylsilanetriyl triacetate 4253-34-3	General population	oral	Acute/short term exposure - systemic effects		1 mg/kg	
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	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Acute/short term exposure - local effects		73 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Acute/short term exposure - systemic effects		73 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Acute/short term exposure - local effects		13 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Acute/short term exposure - systemic effects		13 mg/m3	
Octamethylcyclotetrasiloxane 556-67-2	General population	oral	Acute/short term exposure - systemic effects		3,7 mg/kg	
Dodecamethylcyclohexasiloxane 540-97-6	Workers	inhalation	Long term exposure - systemic effects		11 mg/m3	
Dodecamethylcyclohexasiloxane 540-97-6	Workers	inhalation	Long term exposure - local effects		1,22 mg/m3	
Dodecamethylcyclohexasiloxane 540-97-6	Workers	inhalation	Acute/short term exposure - local effects		6,1 mg/m3	
Dodecamethylcyclohexasiloxane 540-97-6	General population	inhalation	Long term exposure -		2,7 mg/m3	

			systemic effects			
Dodecamethylcyclohexasiloxane 540-97-6	General population	inhalation	Long term exposure - local effects		0,3 mg/m3	
Dodecamethylcyclohexasiloxane 540-97-6	General population	inhalation	Acute/short term exposure - local effects		1,5 mg/m3	
Dodecamethylcyclohexasiloxane 540-97-6	General population	oral	Long term exposure - systemic effects		1,7 mg/kg	
Dodecamethylcyclohexasiloxane 540-97-6	General population	oral	Acute/short term exposure - systemic effects		1,7 mg/kg	
Decamethylcyclopentasiloxane 541-02-6	Workers	inhalation	Long term exposure - systemic effects		97,3 mg/m3	
Decamethylcyclopentasiloxane 541-02-6	Workers	inhalation	Long term exposure - local effects		24,2 mg/m3	
Decamethylcyclopentasiloxane 541-02-6	General population	oral	Long term exposure - systemic effects		5 mg/kg	
Decamethylcyclopentasiloxane 541-02-6	General population	inhalation	Long term exposure - systemic effects		17,3 mg/m3	
Decamethylcyclopentasiloxane 541-02-6	General population	inhalation	Long term exposure - local effects		4,3 mg/m3	

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
Filter type: A (EN 14387)

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

Appearance	liquid liquid red
Odor	Acetic acid
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	> 100 °C (> 212 °F)
Flash point	> 100 °C (> 212 °F)
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
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))	1,05 g/cm3
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative)	No data available / Not applicable
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

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
Strong oxidizing agents.
Polymerises in presence of water.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
Excessive heat.

10.5. Incompatible materials
See section reactivity.

10.6. Hazardous decomposition products
Evolves acetic acid during cure.

SECTION 11: Toxicological information

General toxicological information:
Inhalation of vapors in high concentration may cause irritation of respiratory system
Acetic acid released during polymerisation of acetoxy curing RTV silicones is irritating to the eyes
Acetic acid is liberated slowly upon contact with moisture.

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
Methyltriacetoxysilane 4253-34-3	LD50	1.600 mg/kg	rat	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)
Dodecamethylcyclohexasiloxane 540-97-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Decamethylcyclopentasiloxane 541-02-6	LD50	> 5.000 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
octamethylcyclotetrasiloxane 556-67-2	LD50	> 2.375 mg/kg	rat	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Dodecamethylcyclohexasiloxane 540-97-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Decamethylcyclopentasiloxane 541-02-6	LD50	> 2.000 mg/kg	rabbit	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
octamethylcyclotetrasiloxane 556-67-2	LC50	36 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
Decamethylcyclopentasiloxane 541-02-6	LC50	8,67 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
Methyltriacetoxysilane 4253-34-3	corrosive	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
octamethylcyclotetrasiloxane 556-67-2	not irritating		rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Dodecamethylcyclohexasiloxane 540-97-6	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Decamethylcyclopentasiloxane 541-02-6	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
Methyltriacetoxysilane 4253-34-3	Category 1 (irreversible effects on the eye)		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)
Dodecamethylcyclohexasiloxane 540-97-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Decamethylcyclopentasiloxane 541-02-6	not irritating	24 h	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
Methyltriacetoxysilane 4253-34-3	not sensitising	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)
Dodecamethylcyclohexasiloxane 540-97-6	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Decamethylcyclopentasiloxane 541-02-6	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

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
Methyltriacetoxysilane 4253-34-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Methyltriacetoxysilane 4253-34-3	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Methyltriacetoxysilane 4253-34-3	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
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)
Dodecamethylcyclohexasiloxane 540-97-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Dodecamethylcyclohexasiloxane 540-97-6	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Decamethylcyclopentasiloxane 541-02-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Decamethylcyclopentasiloxane 541-02-6	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Decamethylcyclopentasiloxane 541-02-6	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation 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)
Dodecamethylcyclohexasiloxane 540-97-6	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Decamethylcyclopentasiloxane 541-02-6	negative	inhalation		rat	OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
Decamethylcyclopentasiloxane 541-02-6	negative	inhalation: vapour		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus 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
Methyltriacetoxysilane 4253-34-3	NOAEL P >= 1.000 mg/kg NOAEL F1 >= 1.000 mg/kg	screening	oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
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)
Dodecamethylcyclohexasiloxane 540-97-6	NOAEL P 1.000 mg/kg NOAEL F1 1.000 mg/kg	screening	oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Decamethylcyclopentasiloxane 541-02-6	NOAEL P >= 160 ppm NOAEL F1 >= 160 ppm NOAEL F2 >= 160 ppm	two-generation study	inhalation: vapour	rat	EPA OPPTS 870.3800 (Reproduction and Fertility Effects)

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
Methyltriacetoxysilane 4253-34-3	NOAEL 50 mg/kg	oral: gavage	28-51 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
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)
Dodecamethylcyclohexasiloxane 540-97-6	NOAEL 1.000 mg/kg	oral: gavage	29 d daily, 7 d/w	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Decamethylcyclopentasiloxane 541-02-6	NOAEL >= 1.000 mg/kg	oral: gavage	13 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:
Do not empty into drains / surface water / ground 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
Methyltriacetoxysilane 4253-34-3	LC50	> 110 mg/l	96 h	Oncorhynchus mykiss	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)
Decamethylcyclopentasiloxane 541-02-6	LC50	Toxicity > Water solubility	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Decamethylcyclopentasiloxane 541-02-6	NOEC	Toxicity > Water solubility	90 d	Oncorhynchus mykiss	OECD Guideline 210 (fish early lite stage 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
octamethylcyclotetrasiloxane 556-67-2	EC50	Toxicity > Water solubility	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Decamethylcyclopentasiloxane 541-02-6	EC50	Toxicity > Water solubility	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
octamethylcyclotetrasiloxane 556-67-2	NOEC	7.9 µg/l	21 d	Daphnia magna	EPA OTS 797.1330 (Daphnid Chronic Toxicity Test)
Dodecamethylcyclohexasiloxane 540-97-6	NOEC	Toxicity > Water solubility		Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Decamethylcyclopentasiloxane 541-02-6	NOEC	Toxicity > Water solubility	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
octamethylcyclotetrasiloxane 556-67-2	EC50	Toxicity > Water solubility	96 h	Selenastrum capricomutum (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 capricomutum (new name: Pseudokirchneriella subcapitata)	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
Dodecamethylcyclohexasiloxane 540-97-6	NOEC	Toxicity > Water solubility		Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Dodecamethylcyclohexasiloxane 540-97-6	EC50	Toxicity > Water solubility		Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Decamethylcyclopentasiloxane 541-02-6	NOEC	Toxicity > Water solubility	96 h	Selenastrum capricomutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Decamethylcyclopentasiloxane 541-02-6	EC50	Toxicity > Water solubility	96 h	Selenastrum capricomutum (new name: Pseudokirchneriella subcapitata)	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
octamethylcyclotetrasiloxane 556-67-2	EC50	Toxicity > Water solubility	3 h	activated sludge	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
Decamethylcyclopentasiloxane 541-02-6	EC0	> 10.000 mg/l	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption test)

12.2. Persistence and degradability

The product is not biodegradable.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
octamethylcyclotetrasiloxane 556-67-2	not readily biodegradable.	aerobic	3,7 %	29 d	OECD Guideline 310 (Ready Biodegradability CO2 in Sealed Vessels (Headspace Test)
Dodecamethylcyclohexasiloxane 540-97-6	not readily biodegradable.	aerobic	4,47 %	28 d	OECD Guideline 310 (Ready Biodegradability CO2 in Sealed Vessels (Headspace Test)
Decamethylcyclopentasiloxane 541-02-6	not readily biodegradable.	aerobic	0,14 %	28 d	OECD Guideline 310 (Ready Biodegradability CO2 in Sealed Vessels (Headspace Test)

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
octamethylcyclotetrasiloxane 556-67-2	12.400	28 d		Pimephales promelas	EPA OTS 797.1520 (Fish Bioconcentration Test-Rainbow Trout)
Dodecamethylcyclohexasiloxane 540-97-6	1.160	49 d		Pimephales promelas	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
Decamethylcyclopentasiloxane 541-02-6	7.060	35 d		Pimephales promelas	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)

12.4. Mobility in soil

Cured adhesives are immobile.

Hazardous substances CAS-No.	LogPow	Temperature	Method
octamethylcyclotetrasiloxane 556-67-2	6,488	25,1 °C	OECD Guideline 123 (Partition Coefficient (1-Octanol / Water), Slow-Stirring Method)
Dodecamethylcyclohexasiloxane 540-97-6	8,87	23,6 °C	other guideline:
Decamethylcyclopentasiloxane 541-02-6	8,023	25,3 °C	OECD Guideline 123 (Partition Coefficient (1-Octanol / Water), Slow-Stirring Method)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT/ vPvB
Methyltriacetoxysilane 4253-34-3	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.
Dodecamethylcyclohexasiloxane 540-97-6	Fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Decamethylcyclopentasiloxane 541-02-6	very Persistent and very Bioaccumulative (vPvB)

12.6. 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

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. 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 (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 vapor.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H361f Suspected of damaging fertility.
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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