



Henkel Ltd · Wood Lane End · HP2 4RQ Hemel Hempstead

Roadcrew Solutions

Volvo Parts Corp, Swift Park  
CV21 1DZ Rugby  
United Kingdom

Customer Number: 488297  
Order number: 11033866  
Date: 17.07.2019

Ladies and Gentlemen,

We are sending you the current safety data sheets for the articles listed below which are subject to the labelling provisions.

According to Regulation (EC) 1907/2006 of the European Community a safety data sheet has to be provided for preparations classified as dangerous

- with the first delivery of the articles, and
- after each serious alteration within the last 12 months.

If you resell the products (e.g. as wholesaler) you are also obliged to inform your customers in the same manner.

Please note that, with immediate effect, exposure scenarios, for substances for which we have prepared a chemical safety assessment, can be downloaded under [mymstds.henkel.com](http://mymstds.henkel.com). The direct link, if applicable, can be found at the end of the safety data sheet.

Please issue these sheets to all persons in your company who are responsible for industrial safety, health protection and for handling these products.

Herewith all previous versions of the safety data sheets are no longer valid.

Best regards

**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
Hexamethyldisilazane 999-97-3	213-668-5 01-2119438176-38	1- < 3 %	Flam. Liq. 2 H225 Acute Tox. 4; Oral H302 Acute Tox. 3; Dermal H311 Acute Tox. 4; Inhalation H332 Aquatic Chronic 3 H412
Trimethoxyvinylsilane 2768-02-7	220-449-8 01-2119513215-52	1- < 3 %	Flam. Liq. 3 H226 Acute Tox. 4 H332 STOT.RB 2 H373
3-Aminopropyltriethoxysilane 919-30-2	213-048-4 01-2119480479-24	0,1- < 1 %	Skin Sens. 1 H317 Skin Corr. 1B H314 Acute Tox. 4; Oral H302
Octamethylcyclotetrasiloxane 556-67-2	209-136-7 01-2119529238-36	0,1- < 1 %	Flam. Liq. 3 H226 Repr. 2 H361f Aquatic Chronic 4 H413  EU REACH Candidate List of Substances of Very High Concern for Authorization (SVHC)
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.

**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**

Prolonged or repeated contact may cause eye irritation.

Prolonged or repeated contact may cause skin irritation.

**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:**

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 (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) can be released.

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus.

**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.

**6.2. Environmental precautions**

Do not empty into drains / surface water / ground water.

**6.3. Methods and material for containment and cleaning up**

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

**7.2. Conditions for safe storage, including any incompatibilities**

Protect against contamination.

Store in sealed original container.

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

<b>SECTION 8: Exposure controls/personal protection</b>
---

**8.1. Control parameters****Occupational Exposure Limits**

Valid for  
Great Britain

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Limestone 1317-65-3 [CALCIUM CARBONATE, INHALABLE DUST]		10	Time Weighted Average (TWA):		EH40 WEL
Limestone 1317-65-3 [CALCIUM CARBONATE, RESPIRABLE DUST]		4	Time Weighted Average (TWA):		EH40 WEL
Limestone 1317-65-3 [LIMESTONE, RESPIRABLE MARBLE, RESPIRABLE]		4	Time Weighted Average (TWA):		EH40 WEL
Limestone 1317-65-3 [LIMESTONE, TOTAL INHALABLE MARBLE, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [CALCIUM CARBONATE, INHALABLE DUST]		10	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [CALCIUM CARBONATE, RESPIRABLE DUST]		4	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [LIMESTONE, RESPIRABLE MARBLE, RESPIRABLE]		4	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [LIMESTONE, TOTAL INHALABLE MARBLE, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL
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
Carbon black 1333-86-4		3,5	Time Weighted Average (TWA):		EH40 WEL

[CALCIUM CARBONATE, TOTAL INHALABLE DUST]				
Calcium carbonate 471-34-1 [CALCIUM CARBONATE, RESPIRABLE DUST]		4	Time Weighted Average (TWA):	IR_OEL
Calcium carbonate 471-34-1 [CALCIUM CARBONATE, TOTAL INHALABLE DUST]		10	Time Weighted Average (TWA):	IR_OEL
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [SILICA, AMORPHOUS, TOTAL INHALABLE DUST]		6	Time Weighted Average (TWA):	IR_OEL
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9 [SILICA, AMORPHOUS, RESPIRABLE DUST]		2,4	Time Weighted Average (TWA):	IR_OEL
Carbon black 1333-86-4 [CARBON BLACK (INHALABLE FRACTION)]		3	Time Weighted Average (TWA):	IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	aqua (freshwater)		0,25 mg/l				
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	aqua (marine water)		0,025 mg/l				
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	sediment (freshwater)				0,45 mg/kg		
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	sediment (marine water)				0,045 mg/kg		
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Soil				0,22 mg/kg		
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	sewage treatment plant (STP)		67 mg/l				
Trimethoxyvinylsilane 2768-02-7	aqua (freshwater)		0,4 mg/l				
Trimethoxyvinylsilane 2768-02-7	aqua (marine water)		0,04 mg/l				
Trimethoxyvinylsilane 2768-02-7	aqua (intermittent releases)		2,4 mg/l				
Trimethoxyvinylsilane 2768-02-7	sewage treatment plant (STP)		6,6 mg/l				
Trimethoxyvinylsilane 2768-02-7	sediment (freshwater)				1,5 mg/kg		
Trimethoxyvinylsilane 2768-02-7	sediment (marine water)				0,15 mg/kg		
Trimethoxyvinylsilane 2768-02-7	Soil				0,06 mg/kg		
3-Aminopropyltriethoxysilane 919-30-2	aqua (freshwater)		0,33 mg/l				
3-Aminopropyltriethoxysilane 919-30-2	aqua (marine water)		0,033 mg/l				
3-Aminopropyltriethoxysilane 919-30-2	aqua (intermittent releases)		3,3 mg/l				
3-Aminopropyltriethoxysilane 919-30-2	Soil				0,05 mg/kg		
3-Aminopropyltriethoxysilane 919-30-2	sewage treatment plant (STP)		13 mg/l				
3-Aminopropyltriethoxysilane 919-30-2	sediment (freshwater)				1,2 mg/kg		
3-Aminopropyltriethoxysilane 919-30-2	sediment (marine water)				0,12 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		10 mg/l				

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				1,27 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
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Workers	inhalation	Long term exposure - systemic effects		53 mg/m3	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Workers	inhalation	Acute/short term exposure - systemic effects		53 mg/m3	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Workers	inhalation	Long term exposure - local effects		133 mg/m3	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Workers	inhalation	Acute/short term exposure - local effects		133 mg/m3	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Workers	dermal	Long term exposure - systemic effects		7,5 mg/kg	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Workers	dermal	Acute/short term exposure - systemic effects		7,5 mg/kg	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	General population	inhalation	Long term exposure - systemic effects		3,7 mg/m3	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	General population	inhalation	Acute/short term exposure - systemic effects		3,7 mg/m3	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	General population	inhalation	Long term exposure - local effects		1,7 mg/m3	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	General population	inhalation	Acute/short term exposure - local effects		1,7 mg/m3	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	General population	oral	Long term exposure - systemic effects		1,1 mg/kg	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	General population	oral	Acute/short term exposure - systemic effects		1,1 mg/kg	
Trimethoxyvinylsilane 2768-02-7	Workers	dermal	Long term exposure - systemic effects		0,2 mg/kg	
Trimethoxyvinylsilane 2768-02-7	Workers	Inhalation	Long term exposure - systemic effects		2,6 mg/m3	
Trimethoxyvinylsilane 2768-02-7	General population	dermal	Acute/short term exposure - systemic effects		0,1 mg/kg	
Trimethoxyvinylsilane 2768-02-7	General population	Inhalation	Acute/short term exposure - systemic effects		0,7 mg/m3	
Trimethoxyvinylsilane 2768-02-7	General population	dermal	Long term exposure - systemic effects		0,1 mg/kg	
Trimethoxyvinylsilane	General	Inhalation	Long term		0,7 mg/m3	

3-Aminopropyltriethoxysilane 919-30-2	Workers	Inhalation	systemic effects Long term exposure - systemic effects	59 mg/m <sup>3</sup>	
3-Aminopropyltriethoxysilane 919-30-2	General population	oral	Acute/short term exposure - systemic effects	5 mg/kg	
3-Aminopropyltriethoxysilane 919-30-2	General population	dermal	Acute/short term exposure - systemic effects	5 mg/kg	
3-Aminopropyltriethoxysilane 919-30-2	General population	Inhalation	Acute/short term exposure - systemic effects	17,4 mg/m <sup>3</sup>	
3-Aminopropyltriethoxysilane 919-30-2	General population	oral	Long term exposure - systemic effects	5 mg/kg	
3-Aminopropyltriethoxysilane 919-30-2	General population	dermal	Long term exposure - systemic effects	5 mg/kg	
3-Aminopropyltriethoxysilane 919-30-2	General population	Inhalation	Long term exposure - systemic effects	17 mg/m <sup>3</sup>	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Long term exposure - systemic effects	73 mg/m <sup>3</sup>	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Long term exposure - local effects	73 mg/m <sup>3</sup>	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Acute/short term exposure - systemic effects	73 mg/m <sup>3</sup>	
Octamethylcyclotetrasiloxane 556-67-2	Workers	inhalation	Acute/short term exposure - local effects	73 mg/m <sup>3</sup>	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Long term exposure - systemic effects	13 mg/m <sup>3</sup>	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Long term exposure - local effects	13 mg/m <sup>3</sup>	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Acute/short term exposure - systemic effects	13 mg/m <sup>3</sup>	
Octamethylcyclotetrasiloxane 556-67-2	General population	inhalation	Acute/short term exposure - local effects	13 mg/m <sup>3</sup>	
Octamethylcyclotetrasiloxane 556-67-2	General population	oral	Long term exposure - systemic effects	3,7 mg/kg	
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/m <sup>3</sup>	
Dodecamethylcyclohexasiloxane 540-97-6	Workers	inhalation	Long term exposure - local effects	1,22 mg/m <sup>3</sup>	

Decamethylcyclpentasiloxane 541-02-6	Workers	inhalation	Acute/short term exposure - systemic effects	97,3 mg/m <sup>3</sup>	
Decamethylcyclpentasiloxane 541-02-6	Workers	inhalation	Acute/short term exposure - local effects	24,2 mg/m <sup>3</sup>	
Decamethylcyclpentasiloxane 541-02-6	Workers	inhalation	Long term exposure - systemic effects	97,3 mg/m <sup>3</sup>	
Decamethylcyclpentasiloxane 541-02-6	Workers	inhalation	Long term exposure - local effects	24,2 mg/m <sup>3</sup>	
Decamethylcyclpentasiloxane 541-02-6	General population	inhalation	Acute/short term exposure - systemic effects	17,3 mg/m <sup>3</sup>	
Decamethylcyclpentasiloxane 541-02-6	General population	inhalation	Acute/short term exposure - local effects	4,3 mg/m <sup>3</sup>	
Decamethylcyclpentasiloxane 541-02-6	General population	oral	Long term exposure - systemic effects	5 mg/kg	
Decamethylcyclpentasiloxane 541-02-6	General population	inhalation	Long term exposure - systemic effects	17,3 mg/m <sup>3</sup>	
Decamethylcyclpentasiloxane 541-02-6	General population	inhalation	Long term exposure - local effects	4,3 mg/m <sup>3</sup>	
Decamethylcyclpentasiloxane 541-02-6	General population	oral	Acute/short term exposure - systemic effects	5 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

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 &gt; 30 minutes permeation time as per EN 374):

nitrile rubber (NBR;  $\geq$  0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to &gt; 480 minutes permeation time as per EN 374):

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	paste paste black
Odor	alcohol-like
Odour threshold	No data available / Not applicable
pH	Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	Not available.
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 (25 °C (77 °F))	< 5 mm hg
Relative vapour density:	No data available / Not applicable
Density ()	1,4 g/cm <sup>3</sup>
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Polymerises in presence of water.
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

Polymerises in presence of water.

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

Prolonged or repeated contact may cause skin irritation.

Prolonged or repeated contact may cause eye irritation.

Inhalation of vapors in high concentration may cause irritation of respiratory system

**11.1. Information on toxicological effects****Acute oral toxicity:**

May cause irritation to the digestive tract.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Hexamethyldisilazane 999-97-3	LD50	851 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Trimethoxyvinylsilane 2768-02-7	LD50	7.120 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
3-Aminopropyltriethoxysilane 919-30-2	LD50	1.457 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
Hexamethyldisilazane 999-97-3	LD50	547 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Trimethoxyvinylsilane 2768-02-7	LD50	3.540 mg/kg	rabbit	not specified
3-Aminopropyltriethoxysilane 919-30-2	LD50	4.076 mg/kg	rabbit	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)
Dodecamethylcyclohexasiloxane	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)

**Acute inhalative toxicity:**

Methanol released during polymerisation of RTV silicones is toxic by inhalation. It is also highly flammable

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
Hexamethyldisilazane 999-97-3	Acute toxicity estimate (ATE)	10,1 mg/l	vapour			Expert judgement
Trimethoxyvinylsilane 2768-02-7	LC50	16,8 mg/l	vapour	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
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
Trimethoxyvinylsilane 2768-02-7	not irritating		rabbit	other guideline:
3-Aminopropyltriethoxysilane 919-30-2	corrosive	1 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
Trimethoxyvinylsilane 2768-02-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
3-Aminopropyltriethoxysilane 919-30-2	highly irritating		rabbit	equivalent or similar to 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
Trimethoxyvinylsilane 2768-02-7	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
3- Aminopropyltriethoxysila ne 919-30-2	sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Octamethylcyclotetrasilox ane 556-67-2	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Dodecamethylcyclohexasi loxane 540-97-6	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Decamethylcyclopentasilox ane 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
Hexamethyldisilazane 999-97-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hexamethyldisilazane 999-97-3	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)
3-Aminopropyltriethoxysilane 919-30-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
3-Aminopropyltriethoxysilane 919-30-2	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
3-Aminopropyltriethoxysilane 919-30-2	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	negative	in vitro mammalian chromosome	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome



loxane 540-97-6					(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
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)
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 $\geq$ 160 ppm NOAEL F1 $\geq$ 160 ppm NOAEL F2 $\geq$ 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
Trimethoxyvinylsilane 2768-02-7	NOAEL < 62,5 mg/kg	oral: gavage	daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
3-Aminopropyltriethoxysilane 919-30-2	NOAEL 200 mg/kg	oral: gavage	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
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 $\geq$ 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.

Cured Loctite products are typical polymers and do not pose any immediate environmental hazards.

**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
Hexamethyldisilazane 999-97-3	LC50	88 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Trimethoxyvinylsilane 2768-02-7	LC50	191 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
3-Aminopropyltriethoxysilane 919-30-2	LC50	> 934 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)	other guideline:
Octamethylcyclotetrasiloxane 556-67-2	LC50		96 h	Oncorhynchus mykiss	EPA OTS 797.1400 (Fish Acute Toxicity Test)
Decamethylcyclopentasiloxane 541-02-6	LC50		96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Decamethylcyclopentasiloxane 541-02-6	NOEC		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
Hexamethyldisilazane 999-97-3	EC50	80 mg/l	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)
3-Aminopropyltriethoxysilane 919-30-2	EC50	331 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Octamethylcyclotetrasiloxane 556-67-2	EC50		48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Decamethylcyclopentasiloxane 541-02-6	EC50		48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

**Chronic toxicity to aquatic invertebrates**

**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
Hexamethyldisilazane 999-97-3	NOEC	2,7 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Algal Growth Inhibition Test)
Hexamethyldisilazane 999-97-3	EC50	19 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Algal 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)
3-Aminopropyltriethoxysilane 919-30-2	EC50	603 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Algal Growth Inhibition Test)
3-Aminopropyltriethoxysilane 919-30-2	NOEC	1,3 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Algal Growth Inhibition Test)
Octamethylcyclotetrasiloxane 556-67-2	EC50		96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
Octamethylcyclotetrasiloxane 556-67-2	NOEC	< 0,022 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
Dodecamethylcyclohexasiloxane 540-97-6	NOEC			Pseudokirchneriella subcapitata	OECD Guideline 201 (Algal Growth Inhibition Test)
Dodecamethylcyclohexasiloxane 540-97-6	EC50			Pseudokirchneriella subcapitata	OECD Guideline 201 (Algal Growth Inhibition Test)
Decamethylcyclopentasiloxane 541-02-6	NOEC		96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Algal Growth Inhibition Test)
Decamethylcyclopentasiloxane 541-02-6	EC50		96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Algal 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
Trimethoxyvinylsilane 2768-02-7	EC50	> 100 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
3-Aminopropyltriethoxysilane 919-30-2	EC10	13 mg/l	5 h		not specified
Octamethylcyclotetrasiloxane 556-67-2	EC50		3 h	activated sludge	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
Decamethylcyclopentasiloxane	EC0	> 10.000 mg/l	30 min	Pseudomonas aeruginosa	DIN 38412, part 27

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Hexamethyldisilazane 999-97-3	not readily biodegradable.	no data	15,3 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Trimethoxyvinylsilane 2768-02-7	not readily biodegradable.	aerobic	51 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
3-Aminopropyltriethoxysilane 919-30-2		aerobic	67 %		OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)
Octamethylcyclotetrasiloxane 556-67-2	not readily biodegradable.	aerobic	3,7 %	29 d	OECD Guideline 310 (Ready Biodegradability CO <sub>2</sub> in Sealed Vessels (Headspace Test))
Dodecamethylcyclohexasiloxane 540-97-6	not readily biodegradable.	aerobic	4,47 %	28 d	OECD Guideline 310 (Ready Biodegradability CO <sub>2</sub> in Sealed Vessels (Headspace Test))
Decamethylcyclopentasiloxane 541-02-6	not readily biodegradable.	aerobic	0,14 %	28 d	OECD Guideline 310 (Ready Biodegradability CO <sub>2</sub> in Sealed Vessels (Headspace Test))

### 12.3. Bioaccumulative potential

No data available.

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	not specified
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

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Product disposal:

Dispose of in accordance with local and national regulations.

Collection and delivery to recycling enterprise or other registered elimination institution.

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 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 vapor.
- H226 Flammable liquid and vapor.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H332 Harmful if inhaled.
- H361f Suspected of damaging fertility.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H412 Harmful to aquatic life with long lasting effects.
- H413 May cause long lasting harmful effects to aquatic life.

**Further information:**

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel's Product Safety and Regulatory Affairs Department (ua-productsafety.de@henkel.com) prior to export to other territories than the European Union.

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.

