

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

Page 1 of 13

### LOCTITE SI 5610 DC400ML EGFD

SDS No. : 273027 V002.0 Revision: 10.11.2020 printing date: 19.11.2020 Replaces version from: 06.09.2019

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

- 1.1. Product identifier LOCTITE SI 5610 DC400ML EGFD
- **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 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):**

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 statement:	H412 Harmful to aquatic life with long lasting effects.
Precautionary statement: Prevention	P273 Avoid release to the environment.

### 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).

## **SECTION 3: Composition/information on ingredients**

## 3.2. Mixtures

### General chemical description:

Part A of two part adhesive

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
	0		
octamethylcyclotetrasiloxane	209-136-7	0,02- 0,25 %	Flam. Liq. 3
556-67-2	01-2119529238-36		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

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 if necessary.

Ingestion: Do not induce vomiting. Seek medical advice.

**4.2. Most important symptoms and effects, both acute and delayed** Prolonged or repeated contact may cause skin irritation.

Prolonged or repeated contact may cause eye 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 Fine water spray

Extinguishing media which must not be used for safety reasons: None known

#### 5.2. Special hazards arising from the substance or mixture

carbon oxides. Silica fume Formaldehyde

#### 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. Ensure adequate ventilation.

#### **6.2. Environmental precautions**

Do not let product enter drains.

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

Scrape up as much material as possible. Ensure adequate ventilation. Store in a partly filled, closed container until 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

Use only in well-ventilated areas. Vapours should be extracted to avoid inhalation. 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

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 adhesive

# **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

## **Occupational Exposure Limits**

Valid for

Great Britain

Ingredient [Regulated substance]	ррт	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
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
Carbon black 1333-86-4 [CARBON BLACK]		3,5	Time Weighted Average (TWA):		EH40 WEL
Carbon black 1333-86-4 [CARBON BLACK]		7	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL

# **Occupational Exposure Limits**

# Valid for

Ireland

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Calcium carbonate 471-34-1 [CALCIUM CARBONATE]		4	Time Weighted Average (TWA):		IR_OEL
Calcium carbonate 471-34-1 [CALCIUM CARBONATE]		10	Time Weighted Average (TWA):		IR_OEL
Carbon black 1333-86-4 [CARBON BLACK]		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	
Octamethylcyclotetrasiloxane	aqua		0,0015				
556-67-2	(freshwater)		mg/l				
Octamethylcyclotetrasiloxane	aqua (marine		0,00015				
556-67-2	water)		mg/l				
Octamethylcyclotetrasiloxane	sewage		10 mg/l				
556-67-2	treatment plant						
	(STP)						
Octamethylcyclotetrasiloxane	sediment				3 mg/kg		
556-67-2	(freshwater)						
Octamethylcyclotetrasiloxane	sediment				0,3 mg/kg		
556-67-2	(marine water)						
Octamethylcyclotetrasiloxane	oral				41 mg/kg		
556-67-2							
Octamethylcyclotetrasiloxane	Soil				0,54 mg/kg		
556-67-2							

## Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
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	

## **Biological Exposure Indices:**

None

## 8.2. Exposure controls:

Engineering controls: Ensure good ventilation/extraction. Respiratory protection: Use only in well-ventilated areas. 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;  $\geq 0.4$  mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): nitrile rubber (NBR;  $\geq 0.4$  mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy

with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection: Wear protective glasses. 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

operties
paste
black
odourless
No data available / Not applicable
Not applicable
Not available.
No data available / Not applicable
Not determined
Not determined
No data available / Not applicable
Heavier than air
1,3 g/cm3
No data available / Not applicable
No data available / Not applicable
Insoluble
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.

### 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.

#### **10.5. Incompatible materials**

See section reactivity.

### 10.6. Hazardous decomposition products

At higher temperatures (>150C) may release formaldehyde (traces).

## **SECTION 11: Toxicological information**

#### 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
octamethylcyclotetrasilox	LD50	> 4.800 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral
ane				Toxicity)
556-67-2				

### 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
octamethylcyclotetrasilox	LD50	> 2.375 mg/kg	rat	equivalent or similar to OECD Guideline 402 (Acute
ane				Dermal Toxicity)
556-67-2				

### Acute inhalative toxicity:

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

Hazardous substances	Value	Value	Test atmosphere	Exposure	Species	Method
CAS-No.	type			time		
octamethylcyclotetrasilox	LC50	36 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute
ane						Inhalation Toxicity)
556-67-2						

### 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
5 5	not irritating		rabbit	equivalent or similar to OECD Guideline 404 (Acute
ane 556-67-2				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
	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye
ane				Irritation / Corrosion)
556-67-2				

### 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
octamethylcyclotetrasilox	not sensitising	Guinea pig maximisation	guinea pig	OECD Guideline 406 (Skin Sensitisation)
ane		test		
556-67-2				

### 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
octamethylcyclotetrasilox ane 556-67-2	negative	bacterial gene mutation assay	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
octamethylcyclotetrasilox ane 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)
octamethylcyclotetrasilox ane 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)
octamethylcyclotetrasilox ane 556-67-2	negative	inhalation		rat	equivalent or similar to OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
octamethylcyclotetrasilox ane 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	Result / Value	Test type	Route of	Species	Method
CAS-No.			application		
octamethylcyclotetrasilox	NOAEL P 300 ppm	two-	inhalation	rat	equivalent or similar to
ane		generation			OECD Guideline 416 (Two-
556-67-2	NOAEL F1 300 ppm	study			Generation Reproduction
		-			Toxicity Study)

## STOT-single exposure:

No data available.

## STOT-repeated exposure::

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

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
octamethylcyclotetrasilox ane 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)
octamethylcyclotetrasilox ane 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.

### **SECTION 12: Ecological information**

### General ecological information:

Cured Loctite products are typical polymers and do not pose any immediate environmental hazards. 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	Value	Value	Exposure time	Species	Method
CAS-No.	type				
octamethylcyclotetrasiloxane	NOEC	0,0044 mg/l	93 d	Salmo gairdneri (new name:	EPA OPPTS 797.1600 (Fish
556-67-2		-		Oncorhynchus mykiss)	Early Life Stage Toxicity
					Test)
octamethylcyclotetrasiloxane	LC50	Toxicity > Water	96 h	Oncorhynchus mykiss	EPA OTS 797.1400 (Fish
556-67-2		solubility			Acute Toxicity Test)

### Toxicity (Daphnia):

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
octamethylcyclotetrasiloxane	EC50	Toxicity > Water	48 h	Daphnia magna	EPA OTS 797.1300
556-67-2		solubility			(Aquatic Invertebrate Acute
					Toxicity Test, Freshwater
					Daphnids)

#### Chronic toxicity to aquatic invertebrates

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

Hazardous substances		Value	Exposure time	Species	Method
CAS-No.	type				
octamethylcyclotetrasiloxane	NOEC	7.9 μg/l	21 d	Daphnia magna	EPA OTS 797.1330
556-67-2					(Daphnid Chronic Toxicity
					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		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		Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)

### Toxicity to microorganisms

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

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
octamethylcyclotetrasiloxane	EC50	Toxicity > Water	3 h	activated sludge	ISO 8192 (Test for
556-67-2		solubility			Inhibition of Oxygen
					Consumption by Activated
					Sludge)

#### 12.2. Persistence and degradability

The product is not biodegradable.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
octamethylcyclotetrasiloxane	not readily biodegradable.	aerobic	3,7 %	29 d	OECD Guideline 310 (Ready
556-67-2					BiodegradabilityCO2 in Sealed
					Vessels (Headspace Test)

### 12.3. Bioaccumulative potential

No data available.

Hazardous substances	Bioconcentratio	Exposure time	Temperature	Species	Method
CAS-No.	n factor (BCF)				
octamethylcyclotetrasiloxane	12.400	28 d		Pimephales	EPA OTS 797.1520 (Fish
556-67-2				promelas	Bioconcentration Test-Rainbow
				-	Trout)

### 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)

#### 12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
5 5	Fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

#### 12.6. Other adverse effects

No data available.

## **SECTION 13: Disposal considerations**

### **13.1.** Waste treatment methods

Product disposal:

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.

Disposal must be made according to official regulations.

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 <3 %

(2010/75/EC)

### 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.

H361f Suspected of damaging fertility.

H410 Very toxic to aquatic life with long lasting effects.

#### 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.

#### Dear Customer,

Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your\_company.com).

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.



# Safety Data Sheet according to (EC) No 1907/2006 as amended Page 1 of 15

## LOCTITE SI 5610 DC400ML EGFD

SDS No. : 243882 V002.0 Revision: 10.11.2020 printing date: 19.11.2020 Replaces version from: 06.09.2019

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

- 1.1. Product identifier LOCTITE SI 5610 DC400ML EGFD
- **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 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):

Serious eye irritation H319 Causes serious eye irritation.

### 2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Signal word:

Warning

Hazard statement:

H319 Causes serious eye irritation.

Category 2

**Precautionary statement:** P337+P313 If eye irritation persists: Get medical advice/attention. **Response** 

## 2.3. Other hazards

None if used properly. Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

### **SECTION 3: Composition/information on ingredients**

### 3.2. Mixtures

### General chemical description:

Part B of a two part adhesive

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Trimethoxy(methyl)silane 1185-55-3	214-685-0 01-2119517436-40	1-< 5%	Flam. Liq. 2 H225
3-(Trimethoxysilyl)propylamine 13822-56-5	237-511-5 01-2119510159-45	1-< 3 %	Skin Irrit. 2; Dermal H315 Eye Dam. 1 H318
Hexamethyldisilizane 999-97-3	213-668-5 01-2119438176-38	0,1-< 1 %	Flam. Liq. 2 H225 Acute Tox. 4; Oral H302 Acute Tox. 3; Dermal H311 Acute Tox. 4; Inhalation H332 Aquatic Chronic 3 H412

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 if necessary.

Ingestion: Do not induce vomiting. Seek medical advice.

**4.2. Most important symptoms and effects, both acute and delayed** EYE: Irritation, conjunctivitis.

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 Fine water spray

#### Extinguishing media which must not be used for safety reasons: None known

### 5.2. Special hazards arising from the substance or mixture

In case of fire, keep containers cool with water spray. carbon oxides. Silica fume Formaldehyde

### **5.3. Advice for firefighters**

Wear self-contained breathing apparatus.

### **SECTION 6: Accidental release measures**

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

Avoid contact with skin and eyes. Ensure adequate ventilation. Wear protective equipment.

#### **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. Ensure adequate ventilation. Store in a partly filled, closed container until 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

Use only in well-ventilated areas. Vapours should be extracted to avoid inhalation. 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

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 adhesive

## **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

### **Occupational Exposure Limits**

Valid for

Great Britain

Ingredient [Regulated substance]	ррт	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

## **Occupational Exposure Limits**

## Valid for

Ireland

Ingredient [Regulated substance]	ррт	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Limestone 1317-65-3 [CALCIUM CARBONATE]		4	Time Weighted Average (TWA):		IR_OEL
Limestone 1317-65-3 [CALCIUM CARBONATE]		10	Time Weighted Average (TWA):		IR_OEL
Stearic acid 57-11-4 [STEARATES (EXCEPT LEAD STEARATE)]		10	Time Weighted Average (TWA):		IR_OEL

## Predicted No-Effect Concentration (PNEC):

Name on list		Exposure	Value				Remarks	
	Compartment	period	mg/l	ppm	mg/kg	others		
3-(Trimethoxysilyl)propylamine 13822-56-5	aqua (freshwater)		0,33 mg/l	ppin	ing/kg	oulers		
3-(Trimethoxysilyl)propylamine 13822-56-5	aqua (marine water)		0,033 mg/l					
3-(Trimethoxysilyl)propylamine 13822-56-5	aqua (intermittent releases)		3,3 mg/l					
3-(Trimethoxysilyl)propylamine 13822-56-5	sediment (freshwater)				1,2 mg/kg			
3-(Trimethoxysilyl)propylamine 13822-56-5	sediment (marine water)				0,12 mg/kg			
3-(Trimethoxysilyl)propylamine 13822-56-5	Soil				0,04 mg/kg			
3-(Trimethoxysilyl)propylamine 13822-56-5	Sewage treatment plant		13 mg/l					
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					

## Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
3-(Trimethoxysilyl)propylamine 13822-56-5	Workers	inhalation	Acute/short term exposure - systemic effects		58 mg/m3	
3-(Trimethoxysilyl)propylamine 13822-56-5	Workers	inhalation	Long term exposure - systemic effects	posure -		
3-(Trimethoxysilyl)propylamine 13822-56-5	Workers	dermal	Acute/short term exposure - systemic effects		8,3 mg/kg	
3-(Trimethoxysilyl)propylamine 13822-56-5	Workers	dermal	Long term exposure - systemic effects		8,3 mg/kg	
3-(Trimethoxysilyl)propylamine 13822-56-5	General population	inhalation	Acute/short term exposure - systemic effects		17,4 mg/m3	
3-(Trimethoxysilyl)propylamine 13822-56-5	General population	inhalation	Long term exposure - systemic effects		17 mg/m3	
3-(Trimethoxysilyl)propylamine 13822-56-5	General population	dermal	Acute/short term exposure - systemic effects		5 mg/kg	
3-(Trimethoxysilyl)propylamine 13822-56-5	General population	dermal	Long term exposure - systemic effects		5 mg/kg	
3-(Trimethoxysilyl)propylamine 13822-56-5	General population	oral	Long term exposure - systemic effects		5 mg/kg	
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	cute/short term 3,7 mg/m3		
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	General population	inhalation	Long term exposure - local effects	Long term 1,7 mg/ exposure - local		
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	General population	inhalation			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	

## **Biological Exposure Indices:**

None

#### 8.2. Exposure controls:

Engineering controls: Ensure good ventilation/extraction.

Respiratory protection: Use only in well-ventilated areas. 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;  $\geq 0.4$  mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): nitrile rubber (NBR;  $\geq 0.4$  mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection: Wear protective glasses. 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

Odor Odour threshold

Appearance

pH Melting point Solidification temperature Initial boiling point Flash point Evaporation rate Flammability Explosive limits Vapour pressure Relative vapour density: paste paste white characteristic No data available / Not applicable

Not applicable Not available. No data available / Not applicable Not determined No data available / Not applicable Heavier than air

D	• .
1)en	S1TV
DUI	bity

() Bulk density Solubility Solubility (qualitative) (Solvent: Water) Partition coefficient: n-octanol/water Auto-ignition temperature Decomposition temperature Viscosity Viscosity (kinematic) Explosive properties Oxidising properties

#### 9.2. Other information

No data available / Not applicable

### **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

Strong oxidizing agents. Acids. 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

Stable under normal conditions of storage and use.

#### **10.5.** Incompatible materials

See section reactivity.

#### 10.6. Hazardous decomposition products

At higher temperatures (>150C) may release formaldehyde (traces).

## **SECTION 11: Toxicological information**

# General toxicological information:

Prolonged or repeated contact may cause skin irritation.

### 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
Trimethoxy(methyl)silane 1185-55-3	LD50	11.685 mg/kg	rat	not specified
3- (Trimethoxysilyl)propyla mine 13822-56-5	LD50	3.030 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Hexamethyldisilizane 999-97-3	LD50	851 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)

#### 1,7 g/cm3

No data available / Not applicable No data available / Not applicable Insoluble

No data available / Not applicable No data available / Not applicable

### Acute dermal toxicity:

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

Hazardous substances	Value	Value	Species	Method
CAS-No.	type			
Trimethoxy(methyl)silane 1185-55-3	LD50	> 9.500 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
3- (Trimethoxysilyl)propyla mine 13822-56-5	LD50	11.300 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Hexamethyldisilizane 999-97-3	LD50	547 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)

### Acute inhalative toxicity:

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

Hazardous substances	Value	Value	Test atmosphere	Exposure	Species	Method
CAS-No.	type			time		
Trimethoxy(methyl)silane	LC50	> 42,1 mg/l	vapour	6 h	rat	OECD Guideline 403 (Acute
1185-55-3						Inhalation Toxicity)
Hexamethyldisilizane	Acute	10,1 mg/l	vapour			Expert judgement
999-97-3	toxicity					
	estimate					
	(ATE)					

### 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
Trimethoxy(methyl)silane 1185-55-3	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
3- (Trimethoxysilyl)propyla mine 13822-56-5	irritating	4 h	rabbit	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
Trimethoxy(methyl)silane 1185-55-3	not irritating	24 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
3- (Trimethoxysilyl)propyla mine 13822-56-5	corrosive		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
Trimethoxy(methyl)silane 1185-55-3	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
3- (Trimethoxysilyl)propyla mine 13822-56-5	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	Result	Type of study /	Metabolic	Species	Method
CAS-No.		Route of	activation /		
		administration	Exposure time		
Trimethoxy(methyl)silane	negative	bacterial reverse	with and without		OECD Guideline 471
1185-55-3		mutation assay (e.g			(Bacterial Reverse Mutation
		Ames test)			Assay)
Hexamethyldisilizane	negative	bacterial reverse	with and without		OECD Guideline 471
999-97-3		mutation assay (e.g			(Bacterial Reverse Mutation
		Ames test)			Assay)
Hexamethyldisilizane	negative	mammalian cell	with and without		OECD Guideline 476 (In vitro
999-97-3		gene mutation assay			Mammalian Cell Gene
					Mutation Test)

### Carcinogenicity

No data available.

### **Reproductive toxicity:**

No data available.

## STOT-single exposure:

No data available.

### STOT-repeated exposure::

No data available.

### Aspiration hazard:

No data available.

### **SECTION 12: Ecological information**

### General ecological information:

Cured Loctite products are typical polymers and do not pose any immediate environmental hazards. In the cured state contribution of this product to Environmental Hazards is insignificant in comparison to articles in which it is used.

Precautions required with respect to Environmental Hazards of articles in which this product is used should be considered. 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	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Trimethoxy(methyl)silane	LC50	> 746 mg/l	96 h	Brachydanio rerio (new name:	OECD Guideline 203 (Fish,
1185-55-3				Danio rerio)	Acute Toxicity Test)
3-	LC50	> 934 mg/l	96 h	Brachydanio rerio (new name:	OECD Guideline 203 (Fish,
(Trimethoxysilyl)propylamine				Danio rerio)	Acute Toxicity Test)
13822-56-5					
Hexamethyldisilizane	LC50	88 mg/l	96 h	Brachydanio rerio (new name:	OECD Guideline 203 (Fish,
999-97-3				Danio rerio)	Acute Toxicity Test)

### Toxicity (Daphnia):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Trimethoxy(methyl)silane 1185-55-3	EC50	> 816 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
3- (Trimethoxysilyl)propylamine 13822-56-5	EC50	331 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hexamethyldisilizane 999-97-3	EC50	80 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

### Chronic toxicity to aquatic invertebrates

No data available.

Toxicity (Algae):

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Trimethoxy(methyl)silane 1185-55-3	EC50	> 913 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Trimethoxy(methyl)silane 1185-55-3	NOEC	> 913 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
3- (Trimethoxysilyl)propylamine 13822-56-5	EC50	> 1.000 mg/l	72 h	Desmodesmus subspicatus	EU Method C.3 (Algal Inhibition test)
3- (Trimethoxysilyl)propylamine 13822-56-5	NOEC	1,3 mg/l	72 h	Desmodesmus subspicatus	EU Method C.3 (Algal Inhibition test)
Hexamethyldisilizane 999-97-3	NOEC	2,7 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hexamethyldisilizane 999-97-3	EC50	19 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)

## Toxicity to microorganisms

No data available.

### 12.2. Persistence and degradability

The product is not biodegradable.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Trimethoxy(methyl)silane 1185-55-3		aerobic	54 %		OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)
3- (Trimethoxysilyl)propylamine 13822-56-5	readily biodegradable	aerobic	80,2 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Hexamethyldisilizane 999-97-3	not readily biodegradable.	no data	15,3 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

## 12.3. Bioaccumulative potential

No data available.

## 12.4. Mobility in soil

Cured adhesives are immobile.

Hazardous substances	LogPow	Temperature	Method
CAS-No.			
3-	-1,3	20 °C	QSAR (Quantitative Structure Activity Relationship)
(Trimethoxysilyl)propylamine			
13822-56-5			

### 12.5. Results of PBT and vPvB assessment

Hazardous substances	PBT / vPvB
CAS-No.	
Trimethoxy(methyl)silane	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
1185-55-3	Bioaccumulative (vPvB) criteria.
3-(Trimethoxysilyl)propylamine	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
13822-56-5	Bioaccumulative (vPvB) criteria.
Hexamethyldisilizane	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
999-97-3	Bioaccumulative (vPvB) criteria.

### 12.6. Other adverse effects

No data available.

## **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

Product disposal:

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.

Disposal must be made according to official regulations.

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 < 5,00 % (2010/75/EC)

# 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:

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H412 Harmful to aquatic life with long lasting effects.

#### **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.

### Dear Customer,

Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your\_company.com).

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.