



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

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LOCTITE SI 5398 RD CR310ML ENDE

SDS No. : 164828
V004.0

Revision: 05.06.2017
printing date: 19.11.2020

Replaces version from: 25.03.2015

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

1.1. Product identifier

LOCTITE SI 5398 RD CR310ML ENDE

Contains:

Methyltriacetoxysilane
Triacetoxethylsilane

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

Intended use:
Silicone sealant

1.3. Details of the supplier of the safety data sheet

Henkel Ltd
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/eye irritation	Category 1
H318 Causes serious eye damage.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Signal word:

Danger

Hazard statement: H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statement: P280 Wear eye protection/face protection.
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.

Evolves acetic acid during cure.

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:

Acetoxy curing silicone

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Triacetoxyethylsilane 17689-77-9	241-677-4 01-2119881778-15	1- < 2 %	Acute Tox. 4; Oral H302 Skin Corr. 1B H314
Methyltriacetoxyasilane 4253-34-3	224-221-9 01-2119962266-32	1- < 2 %	Acute Tox. 4; Oral H302 Skin Corr. 1B H314

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:

Should not be a problem as product is of low volatility. However, if feeling unwell remove patient to fresh air.

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

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

SKIN: Redness, inflammation.

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 the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.

5.3. Advice for firefighters

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

Additional information:

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

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.

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.
Ensure that workrooms are adequately ventilated.
Vapours should be extracted to avoid inhalation.
Avoid skin and eye contact.

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 sealant

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational Exposure Limits**Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Quartz (SiO ₂) 14808-60-7 [SILICA, RESPIRABLE CRYSTALLINE]		0,1	Time Weighted Average (TWA):		EH40 WEL
Acetic acid 64-19-7 [ACETIC ACID]	10	25	Time Weighted Average (TWA):	Indicative	ECLTV
Acetic acid 64-19-7 [ACETIC ACID]	20	50	Short Term Exposure Limit (STEL):	Indicative	ECLTV

Occupational Exposure LimitsValid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Quartz (SiO ₂) 14808-60-7 [QUARTZ, RESPIRABLE DUST (SEE CRYSTALLINE SILICA)]		0,1	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]	15	37	Short Term Exposure Limit (STEL):	Indicative OELV	IR_OEL
Acetic acid 64-19-7 [ACETIC ACID]	10	25	Time Weighted Average (TWA):	Indicative	ECLTV
Acetic acid 64-19-7 [ACETIC ACID]	20	50	Short Term Exposure Limit (STEL):	Indicative	ECLTV

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Triacetoxyethylsilane 17689-77-9	aqua (freshwater)		>= 0,2 mg/l				
Triacetoxyethylsilane 17689-77-9	aqua (marine water)		>= 0,02 mg/l				
Triacetoxyethylsilane 17689-77-9	aqua (intermittent releases)		1,7 mg/l				
Triacetoxyethylsilane 17689-77-9	sediment (freshwater)				>= 0,16 mg/kg		
Triacetoxyethylsilane 17689-77-9	sediment (marine water)				>= 0,016 mg/kg		
Triacetoxyethylsilane 17689-77-9	soil				>= 0,031 mg/kg		
Triacetoxyethylsilane 17689-77-9	sewage treatment plant (STP)		> 1 mg/l				
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				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Triacetoxethylsilane 17689-77-9	Workers	Inhalation	Long term exposure - local effects		32,5 mg/m ³	
Triacetoxethylsilane 17689-77-9	Workers	Inhalation	Acute/short term exposure - local effects		32,5 mg/m ³	
Triacetoxethylsilane 17689-77-9	General population	Inhalation	Acute/short term exposure - local effects		65 mg/m ³	
Triacetoxethylsilane 17689-77-9	General population	Inhalation	Long term exposure - local effects		10,8 mg/m ³	
Methylsilanetriyl triacetate 4253-34-3	Workers	inhalation	Long term exposure - systemic effects		25 mg/m ³	
Methylsilanetriyl triacetate 4253-34-3	Workers	inhalation	Acute/short term exposure - systemic effects		25 mg/m ³	
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/m ³	
Methylsilanetriyl triacetate 4253-34-3	General population	inhalation	Acute/short term exposure - local effects		5,1 mg/m ³	
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	

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)

This recommendation should be matched to local conditions.

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:

Protective eye equipment should conform to EN166.

Wear protective glasses.

Skin protection:

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Wear suitable protective clothing.

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 red
Odor	Acetic acid
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 determined
Flash point	> 150 °C (> 302 °F)
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	< 0,1 mm hg
Relative vapour density:	Heavier than air
Density (ρ)	1,1 g/cm ³
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative)	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**

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.
Protect from direct sunlight.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

carbon oxides.
At higher temperatures (>150C) may release formaldehyde (traces).
Evolves acetic acid during cure.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****General toxicological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:

May cause irritation to the digestive tract.

Inhalative toxicity:

Inhalation of vapors in high concentration may cause irritation of respiratory system
Acetic acid is liberated slowly upon contact with moisture.

Skin irritation:

Causes skin irritation.

Eye irritation:

Causes serious eye damage.
Acetic acid released during polymerisation of acetoxy curing RTV silicones is irritating to the eyes

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Triacetoxylethylsilane 17689-77-9	LD50	1.460 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Methyltriacetoxysilane 4253-34-3	LD50	1.600 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Triacetoxylethylsilane 17689-77-9	Category 1B (corrosive)	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Methyltriacetoxysilane 4253-34-3	corrosive	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components 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)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Triacetoxethylsilane 17689-77-9	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Methyltriacetoxysilane 4253-34-3	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Triacetoxethylsilane 17689-77-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Methyltriacetoxysilane 4253-34-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Reproductive toxicity:

Hazardous substances CAS-No.	Result / Classification	Species	Exposure time	Species	Method
Methyltriacetoxysilane 4253-34-3	NOAEL P = >= 1.000 mg/kg NOAEL F1 = >= 1.000 mg/kg	screening oral: gavage	28-51 d	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Repeated dose toxicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Methyltriacetoxysilane 4253-34-3	NOAEL=50 mg/kg	oral: gavage	28-51 ddaily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

SECTION 12: Ecological information

General ecological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

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.

12.1. Toxicity

Ecotoxicity:

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

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Triacetoxethylsilane 17689-77-9	LC50	251 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Triacetoxethylsilane 17689-77-9	EC50	62 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Triacetoxethylsilane 17689-77-9	IC50	73 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methyltriacetoxysilane 4253-34-3	LC50	> 110 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)

12.2. Persistence and degradability

Persistence and Biodegradability:

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Triacetoxethylsilane 17689-77-9			74 %	OECD Guideline 301 A (old version) (Ready Biodegradability: Modified AFNOR Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Mobility:

Cured adhesives are immobile.

Bioaccumulative potential:

No data available.

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Triacetoxethylsilane 17689-77-9	0,74					not specified

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB

Triacetoxyethylsilane 17689-77-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Methyltriacetoxysilane 4253-34-3	Not 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.

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 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

VOC content < 5 %
(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:

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

Further information:

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.