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

SDS No. : 152782
V005.3

LOCTITE SI 5145 known as NUVA-SIL(R) 5145

Revision: 26.06.2017
printing date: 26.01.2018
Replaces version from: 02.02.2016

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

1.1. Product identifier
LOCTITE SI 5145 known as NUVA-SIL(R) 5145

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):
The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

2.2. Label elements

Label elements (CLP):

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

Supplemental information EUH210 Safety data sheet available on request.

2.3. Other hazards
Methoxy curing silicones release methanol in contact with moisture. Methanol is toxic if swallowed and harmful by inhalation. It is highly flammable.
This product contains trace quantities of Hexamethyldisilazane. Hexamethyldisilazane reacts instantly with residual moisture in the package, and produces correspondingly small amounts of ammonia.
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:
Silicone sealant

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Silane, dimethoxydimethyl- 1112-39-6	214-189-4 01-2119976290-35	1- < 5 %	Flam. Liq. 2 H225
Tetraethyl silicate 78-10-4	201-083-8 01-2119496195-28	1- < 5 %	Flam. Liq. 3 H226 Acute Tox. 4; Inhalation H332 Eye Irrit. 2 H319 STOT SE 3 H335
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 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
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

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 (NOx) can be released.
Silicon dioxide

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.
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
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.
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 sealant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

None

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m³	Value type	Short term exposure limit category / Remarks	Regulatory list
Tetraethyl orthosilicate 78-10-4 [ETHYL SILICATE]	10	85	Time Weighted Average (TWA):		IR_OEL
Tetraethyl orthosilicate 78-10-4 [TETRAETHYL ORTHOSILICATE]	5	44	Time Weighted Average (TWA):	Indicative	ECTLV

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Tetraethyl silicate 78-10-4	aqua (freshwater)		0,192 mg/l				
Tetraethyl silicate 78-10-4	aqua (marine water)		0,0192 mg/l				
Tetraethyl silicate 78-10-4	aqua (intermittent releases)		10 mg/l				
Tetraethyl silicate 78-10-4	sediment (freshwater)				0,83 mg/kg		
Tetraethyl silicate 78-10-4	sediment (marine water)				0,083 mg/kg		
Tetraethyl silicate 78-10-4	soil				0,05 mg/kg		
Tetraethyl silicate 78-10-4	sewage treatment plant (STP)		4000 mg/l				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Tetraethyl silicate 78-10-4	Workers	dermal	Acute/short term exposure - systemic effects		56 mg/kg	
Tetraethyl silicate 78-10-4	Workers	Inhalation	Acute/short term exposure - systemic effects		85 mg/m3	
Tetraethyl silicate 78-10-4	Workers	Inhalation	Acute/short term exposure - local effects		85 mg/m3	
Tetraethyl silicate 78-10-4	Workers	dermal	Long term exposure - systemic effects		56 mg/kg	
Tetraethyl silicate 78-10-4	Workers	Inhalation	Long term exposure - systemic effects		85 mg/m3	
Tetraethyl silicate 78-10-4	Workers	Inhalation	Long term exposure - local effects		85 mg/m3	
Tetraethyl silicate 78-10-4	General population	dermal	Acute/short term exposure - systemic effects		3 mg/kg	
Tetraethyl silicate 78-10-4	General population	Inhalation	Acute/short term exposure - local effects		14 mg/m3	
Tetraethyl silicate 78-10-4	General population	Inhalation	Acute/short term exposure - systemic effects		14 mg/m3	
Tetraethyl silicate 78-10-4	General population	dermal	Long term exposure - systemic effects		3 mg/kg	
Tetraethyl silicate 78-10-4	General population	Inhalation	Long term exposure - systemic effects		14 mg/m3	
Tetraethyl silicate 78-10-4	General population	Inhalation	Long term exposure - local effects		14 mg/m3	

Biological Exposure Indices:
None

8.2. Exposure controls:

Engineering controls:
Ensure adequate ventilation.

Respiratory protection:
Ensure adequate ventilation.
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area
Filter type: A (EN 14387)

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
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

Appearance	paste transparent
Odor	Alcoholic
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	Product is a solid. (ASTM D 4359)
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure (21 °C (69.8 °F))	< 13 mbar
Relative vapour density:	No data available / Not applicable
Density	No data available / Not applicable
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Polymerises in presence of water.
Solubility (qualitative) (Solvent: Acetone)	Not determined
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.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
No decomposition if used according to specifications.
Exposure to air or moisture over prolonged periods.

10.5. Incompatible materials
See section reactivity.

10.6. Hazardous decomposition products
Methanol is liberated slowly upon exposure to moisture.

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.
Ingestion of large quantities may cause liver or kidney damage.

Inhalative toxicity:
Inhalation of vapors in high concentration may cause irritation of respiratory system
Methanol released during polymerisation of RTV silicones is toxic by inhalation. It is also highly flammable

Skin irritation:
Prolonged or repeated contact may cause skin irritation.

Eye irritation:
Prolonged or repeated contact may cause eye irritation.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Silane, dimethoxydimethyl- 1112-39-6	LD50	> 2.007 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Tetraethyl silicate 78-10-4	LD50	> 2.500 mg/kg	oral		rat	OECD Guideline 423 (Acute Oral toxicity)
Hexamethyldisilizane 999-97-3	LD50	851 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Hexamethyldisilizane 999-97-3	Acute toxicity estimate (ATE)	10,1 mg/l	vapour			Expert judgement

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Hexamethyldisilizane 999-97-3	LD50	547 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Tetraethyl silicate 78-10-4	not sensitising	Buehler 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
Tetraethyl silicate 78-10-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)
Hexamethyldisilizane 999-97-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation 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.

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
Silane, dimethoxydimethyl- 1112-39-6	EC50	> 100 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Tetraethyl silicate 78-10-4	LC50	> 245 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	EU Method C.1 (Acute Toxicity for Fish)
Tetraethyl silicate 78-10-4	EC50	> 75 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Tetraethyl silicate 78-10-4	NOEC	22 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	> 22 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Tetraethyl silicate 78-10-4	EC50	> 100 mg/l	Bacteria	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Hexamethyldisilizane 999-97-3	LC50	88 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hexamethyldisilizane 999-97-3	EC50	80 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hexamethyldisilizane 999-97-3	NOEC	2,7 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	19 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability

Persistence and Biodegradability:
The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Silane, dimethoxydimethyl- 1112-39-6		aerobic	0 %	OECD Guideline 310 (Ready BiodegradabilityCO2 in Sealed Vessels (Headspace Test)
Tetraethyl silicate 78-10-4	readily biodegradable	aerobic	98 %	OECD Guideline 301 A (old version) (Ready Biodegradabiltiy: Modified AFNOR Test)
Hexamethyldisilizane 999-97-3		no data	15,3 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle 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
Silane, dimethoxydimethyl- 1112-39-6	2					EU Method A.8 (Partition Coefficient)
Tetraethyl silicate 78-10-4	0,04					QSAR (Quantitative Structure Activity Relationship)

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
Tetraethyl silicate 78-10-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hexamethyldisilizane 999-97-3	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.
Contribution of this product to waste is very insignificant in comparison to article in which it is used
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.
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 %
(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.
H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

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.