



Safety Data Sheet

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

SDS No. : 152782

V001.12

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Section 1. Identification of the substance/preparation and of the company/undertaking

Product name: LOCTITE SI 5145 known as NUVA-SIL(R) 5145

Other means of identification: LOCTITE SI 5145 TB40ML TEMPFLEX

Product code: IDH88318

Recommended use of the chemical and restrictions on use

Intended use: Silicone sealant

Identification of manufacturer, importer or distributor

Importer: Henkel Malaysia Sdn Bhd 46th Floor, Menara TM, Jalan Pantai Baharu, 59200 Kuala Lumpur, Malaysia. Phone : + 603 22461000 Fax : + 60322461188

E-mail address of person responsible for Safety Data Sheet: ap-ua-psra.sea@henkel.com

Emergency information: FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call CHEMTREC: +1 703-741-5970

Section 2. Hazards identification

GHS Classification:

Substance or mixture is not classified as hazardous according to Globally Harmonized System(GHS).

GHS label elements:

Substance or mixture is not classified as hazardous according to Globally Harmonized System(GHS).

Section 3. Composition / information on ingredients**Substance or Mixture:**
Mixture**Declaration of hazardous chemical:**

Hazard component CAS-No.	Content	GHS Classification
Dimethoxydimethylsilane 1112-39-6	1- 10 %	Flammable liquids 2 H225
tetraethyl silicate 78-10-4	1- 10 %	Flammable liquids 3 H226 Acute toxicity 4; Inhalation H332 Serious eye damage/eye irritation 2 H319 Specific target organ toxicity - single exposure 3 H335
octamethylcyclotetrasiloxane 556-67-2	0.1- 1 %	Flammable liquids 3 H226 Toxic to reproduction 2 H361 Chronic hazards to the aquatic environment 4 H413
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	0.1- 1 %	Flammable liquids 2 H225 Acute toxicity 4; Oral H302 Acute toxicity 4; Inhalation H332 Acute toxicity 3; Dermal H311 Chronic hazards to the aquatic environment 3 H412

Section 4. 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.
Indication of immediate medical attention and special treatment needed:	See section: Description of first aid measures

Section 5. Fire fighting measures**Suitable extinguishing media:** Carbon dioxide, foam, powder

Specific hazards arising from the chemical:	In the event of a fire, carbon monoxide (CO), carbon dioxide (CO ₂) and nitrogen oxides (NO _x) can be released. Silicon dioxide
Special protection equipment and precautions for firefighters:	Wear self-contained breathing apparatus.
Additional fire fighting advice:	In case of fire, keep containers cool with water spray.

Section 6. Accidental release measures

Personal precautions:	Avoid contact with skin and eyes. Ensure adequate ventilation. Wear protective equipment. See advice in section 8
Environmental precautions:	Do not empty into drains / surface water / ground water.
Clean-up methods:	For small spills wipe up with paper towel and place in container for disposal. For large spills absorb onto inert absorbent material and place in sealed container for disposal. Dispose of contaminated material as waste according to Section 13.

Section 7. Handling and storage

Handling:	Use only in well-ventilated areas. Vapours should be extracted to avoid inhalation. Avoid skin and eye contact. See advice in section 8
Storage:	Store in a cool, well-ventilated place. Refer to Technical Data SheetNever allow product to get in contact with water during storage

Section 8. Exposure controls / personal protection**Components with specific control parameters for workplace:**

ETHYL SILICATE 78-10-4	Value type	Time Weighted Average (TWA):
	ppm	10
	Remarks	ACGIH
ETHYL SILICATE 78-10-4	Value type	Time Weighted Average (TWA):
	ppm	10
	mg/m³	85
	Remarks	MY OEL

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.

Body protection:

Wear suitable protective clothing.

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

Engineering controls:

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

Hygienic measures:

Take off contaminated clothing and wash before reuse. Wash hands before work breaks and after finishing work. Do not eat, drink or smoke while working.

Section 9. Physical and chemical properties

Appearance:	transparent paste
Odor:	Alcoholic
Odor threshold (CA):	No data available.
pH:	Not applicable
Melting point / freezing point:	No data available.
Specific gravity:	1.1
Boiling point:	No data available.
Flash point:	36 °C (96.8 °F)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure: (; 21 °C (69.8 °F))	< 13 mbar

Vapor density:	No data available.
Density:	1.1 g/cm ³
Solubility:	Polymerises in presence of water.
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
VOC content: (2010/75/EC)	< 5 %

Section 10. Stability and reactivity

Reactivity/Incompatible materials:	Polymerises in presence of water.
Chemical stability:	Stable under recommended storage conditions.
Conditions to avoid:	Exposure to air or moisture over prolonged periods. No decomposition if used according to specifications.
Hazardous decomposition products:	Methanol is liberated slowly upon exposure to moisture.

Section 11. Toxicological information

General toxicological information:	Methanol released during polymerisation of RTV silicones is toxic by inhalation. It is also highly flammable
Inhalative toxicity:	Acute toxicity estimate (ATE) : > 20 mg/l Exposure time: 4 h Test atmosphere: Vapor. Method: Calculation method
Dermal toxicity:	Acute toxicity estimate (ATE) : > 2,000 mg/kg Method: Calculation method
Symptoms of Overexposure:	Prolonged or repeated contact may cause skin irritation. Prolonged or repeated contact may cause eye irritation.

Acute oral toxicity:

Dimethoxydimethylsilane 1112-39-6	Value type	LD50
	Value	> 2,007 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
tetraethyl silicate 78-10-4	Value type	LD50
	Value	> 2,500 mg/kg
	Species	rat
	Method	OECD Guideline 423 (Acute Oral toxicity)
octamethylcyclotetrasiloxane 556-67-2	Value type	LD50
	Value	> 4,800 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Value type	LD50
	Value	851 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)

Acute inhalative toxicity:

octamethylcyclotetrasiloxane 556-67-2	Value type	LC50
	Value	36 mg/l
	Exposure time	4 h
	Species	rat
	Method	OECD Guideline 403 (Acute Inhalation Toxicity)
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Value type	Acute toxicity estimate (ATE)
	Value	10.1 mg/l
	Exposure time	
	Species	
	Method	Expert judgement

Acute dermal toxicity:

octamethylcyclotetrasiloxane 556-67-2	Value type	LD50
	Value	> 2,375 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Value type	LD50
	Value	547 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

tetraethyl silicate 78-10-4	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
octamethylcyclotetrasiloxane 556-67-2	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

octamethylcyclotetrasiloxane 556-67-2	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

tetraethyl silicate 78-10-4	Result	not sensitising
	Test type	Buehler test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)
octamethylcyclotetrasiloxane 556-67-2	Result	not sensitising
	Test type	Guinea pig maximisation test
	Species	guinea pig
	Method	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

tetraethyl silicate 78-10-4	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	EU Method B.13/14 (Mutagenicity)
octamethylcyclotetrasiloxane 556-67-2	Result	negative
	Type of study / Route of administration	bacterial gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
octamethylcyclotetrasiloxane 556-67-2	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
octamethylcyclotetrasiloxane 556-67-2	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
octamethylcyclotetrasiloxane 556-67-2	Result	negative
	Type of study / Route of administration	inhalation
	Metabolic activation / Exposure time	
	Species	rat
octamethylcyclotetrasiloxane 556-67-2	Method	equivalent or similar to OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
	Result	negative
	Type of study / Route of administration	oral: gavage
	Metabolic activation / Exposure time	
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Species	rat
	Method	equivalent or similar to OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Repeated dose toxicity:

octamethylcyclotetrasiloxane 556-67-2	Result	LOAEL=35 ppm
	Route of application	inhalation
	Exposure time / Frequency of treatment	6 h nose only inhalation 5 days/week for 13 weeks
	Species	rat
	Method	OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)
octamethylcyclotetrasiloxane 556-67-2	Result	NOAEL=960 mg/kg
	Route of application	dermal
	Exposure time / Frequency of treatment	3 w 5 d/w
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Section 12. Ecological information**General ecological information:**

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

Toxicity:

Dimethoxydimethylsilane 1112-39-6	Value type	LC50
	Value	> 126 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Oncorhynchus mykiss
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)

Dimethoxydimethylsilane 1112-39-6	Value type	EC50
	Value	> 100 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Dimethoxydimethylsilane 1112-39-6	Value type	EC50
	Value	> 118 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	NOEC
	Value	118 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Dimethoxydimethylsilane 1112-39-6	Value type	EC10
	Value	> 100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge of a predominantly domestic sewage
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
tetraethyl silicate 78-10-4	Value type	LC50
	Value	> 245 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Brachydanio rerio (new name: Danio rerio)
	Method	EU Method C.1 (Acute Toxicity for Fish)
tetraethyl silicate 78-10-4	Value type	EC50
	Value	> 75 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
tetraethyl silicate 78-10-4	Value type	NOEC
	Value	22 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC50
	Value	> 22 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Pseudokirchneriella subcapitata
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
tetraethyl silicate 78-10-4	Value type	EC50
	Value	> 100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	activated sludge of a predominantly domestic sewage
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
octamethylcyclotetrasiloxane 556-67-2	Value type	NOEC
	Value	0.0044 mg/l
	Acute Toxicity Study	Fish
	Exposure time	93 d
	Species	Salmo gairdneri (new name: Oncorhynchus mykiss)
	Method	EPA OPPTS 797.1600 (Fish Early Life Stage Toxicity Test)
octamethylcyclotetrasiloxane 556-67-2	Value type	EC10
	Value	0.022 mg/l
	Acute Toxicity Study	Algae
	Exposure time	96 h
	Species	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)
	Method	EPA OTS 797.1050 (Algal Toxicity, Tiers I and II)
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Value type	LC50
	Value	88 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Brachydanio rerio (new name: Danio rerio)
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)

1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Value type	EC50
	Value	80 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Value type	NOEC
	Value	2.7 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC50
	Value	19 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)

Persistence and degradability:

Dimethoxydimethylsilane 1112-39-6	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 310 (Ready BiodegradabilityCO ₂ in Sealed Vessels (Headspace Test)
tetraethyl silicate 78-10-4	Result	readily biodegradable
	Route of application	aerobic
	Degradability	98 %
	Method	OECD Guideline 301 A (old version) (Ready Biodegradability: Modified AFNOR Test)
octamethylcyclotetrasiloxane 556-67-2	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	3.7 %
	Method	OECD Guideline 310 (Ready BiodegradabilityCO ₂ in Sealed Vessels (Headspace Test)
1,1,1,3,3,3-Hexamethyldisilazane 999-97-3	Result	not readily biodegradable.
	Route of application	no data
	Degradability	15.3 %
	Method	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

Bioaccumulative potential / Mobility in soil:

Dimethoxydimethylsilane 1112-39-6	LogPow	2
	Temperature	20 °C
	Method	QSAR (Quantitative Structure Activity Relationship)
tetraethyl silicate 78-10-4	LogPow	0.04
	Temperature	
	Method	QSAR (Quantitative Structure Activity Relationship)
octamethylcyclotetrasiloxane 556-67-2	Bioconcentration factor (BCF)	12,400
	Exposure time	28 d
	Species	Pimephales promelas
	Temperature	
	Method	EPA OTS 797.1520 (Fish Bioconcentration Test-Rainbow Trout)
octamethylcyclotetrasiloxane 556-67-2	LogPow	6.488
	Temperature	25.1 °C
	Method	OECD Guideline 123 (Partition Coefficient (1-Octanol / Water), Slow-Stirring Method)

Section 13. Disposal considerations**Product****Method of 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.

Packaging

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.
Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

Section 14. Transport information

Road transport ADR:

Not dangerous goods

Railroad transport RID:

Not dangerous goods

Inland water transport ADN:

Not dangerous goods

Marine transport IMDG:

Not dangerous goods

Air transport IATA:

Not dangerous goods

Section 15. Regulatory information

Regulatory Information: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 [P.U.(A) 310/213]
Industry Code of Practice on Chemicals Classification and Hazard Communication

Global inventory status:

Regulatory list	Notification
TSCA	yes
DSL	yes
KECI (KR)	yes
ENCS (JP)	yes
ISHL (JP)	yes
IECSC	yes
AICS	yes
PICCS (PH)	yes
CH INV	yes
EINECS	yes

Section 16. Other information

Disclaimer:

This Safety Data Sheet has been generated based on Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 [P.U.(A) 310/213] only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance. 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.

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