



Safety Data Sheet in compliance with Indian Manufacture, Storage and Import of Hazardous Chemical (Amendment) Rules, 2000

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LOCTITE SI 587 BLUE RTV SILICONE GASKET known as
LOCTITE® 587™ FLANGE SEALANT

MSDS-No. : 153776
V001.3

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

Product identifier

LOCTITE SI 587 BLUE RTV SILICONE GASKET known as LOCTITE® 587™ FLANGE SEALANT

Material: 234592

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

Intended use:
Silicone Sealant

Identification of manufacturer, importer or distributor:

Manufacturer: Henkel Adhesives Technologies India Pvt. Ltd. D3/D4, MIDC, Jejuri - 412303 India. TEL : +91 9272203768 FAX : +91 2115 253248, Website www.henkel.com

Emergency telephone number

IN HAT: +91 9272203768

In case of any emergency call Poison Information Centre, JSS Hospital, Mysore: Toll Free No: 1800-425-0207/Mobile: +91 8892 42 5667

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification (DPD):

Sensitizing
R43 May cause sensitisation by skin contact.

Label elements

Label elements (DPD):

Risk phrases:
R43 May cause sensitisation by skin contact.

Safety phrases:
S24 Avoid contact with skin.
S37 Wear suitable gloves.
S51 Use only in well-ventilated areas.

SECTION 3: Composition/information on ingredients

Declaration of ingredients according to DPD (EC) No 1999/45:

Hazardous components CAS-No.	EC Number	content	Classification
Vinyl oximinosilane 2224-33-1	218-747-8	>= 1 - <= 20 %	Xn - Harmful; R48/22 Xi - Irritant; R41, R43
Aluminium powder (stabilised) 7429-90-5	231-072-3	>= 0,1 - <= 10 %	F - Highly flammable; R11, R15
3-(Trimethoxysilyl)propylamine 13822-56-5	237-511-5	>= 0,1 - <= 10 %	Xi - Irritant; R38, R41

For full text of the R-Phrases indicated by codes see section 16 'Other Information'.
Substances without classification may have community workplace exposure limits available.

Section 4. First aid measures

Inhalation:	Move to fresh air. If symptoms persist, seek medical advice.
Skin contact:	Wipe off paste with paper towel or cloth. Wash with soap and water. If skin irritation persists, call a physician.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
Ingestion:	Do not induce vomiting. If symptoms develop and persist, get medical attention.
Symptoms/effects, acute and delayed:	Skin disorders.

Section 5. Fire fighting measures

Suitable extinguishing media:	Dry chemical. foam Carbon dioxide.
Specific hazards arising from the chemical:	None
Special protection equipment and precautions for firefighters:	Wear self-contained breathing apparatus.
Hazardous combustion products:	Oxides of carbon. Oxides of silicon. Formaldehyde.

Section 6. Accidental release measures

Personal precautions:	Avoid contact with skin and eyes.
Environmental precautions:	Do not let product enter drains.
Clean-up methods:	Scrape up as much material as possible. Ensure adequate ventilation. Store in a partly filled, closed container until disposal.

SECTION 7: Handling and storage

Precautions for safe handling

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.

Do not handle contact lenses until all sealant has been removed from hands. Residual sealant may transfer to lenses and cause eye irritation.

Conditions for safe storage, including any incompatibilities

Store in a cool, well-ventilated place.

Never allow product to get in contact with water during storage

Section 8. Exposure controls / personal protection

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

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.

Body protection:

Wear suitable protective clothing.

Engineering controls:

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

General protection and hygiene measures:

Good industrial hygiene practices should be observed.

SECTION 9: Physical and chemical properties

Appearance:

blue

paste

Odor:

mild, Petroleum

Odor threshold (CA):

No data available.

pH:

Not applicable

Melting point / freezing point:

Not available.

Specific gravity:

1,31

Boiling point:

No data available.

Flash point:

> 93 °C (> 199.4 °F)

(Tagliabue closed cup)

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: (; 20 °C (68 °F))	< 5 mm hg
Vapor density:	Not available.
Density:	No data available.
Solubility:	Solvent: Water, Polymerises in presence of water.
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	Not available.
Decomposition temperature:	
Viscosity:	No data available.
VOC content:	3,33 % 43,09 g/l

Section 10. Stability and reactivity

Reactivity/Incompatible materials:	Acids. Bases. Oxidizing agents. Polymerizes on contact with water.
Possibility of hazardous reactions:	Will not occur.
Conditions to avoid:	Stable Exposure to air or moisture over prolonged periods.
Hazardous decomposition products:	Oxides of carbon. Oxides of silicon. Formaldehyde Methyl ethyl ketoxime formed during cure.

SECTION 11: Toxicological information

Information on toxicological effects

General toxicological information:
No toxicological data available.

Skin irritation:

Methylethyl ketoxime released during polymerisation of oxime curing silicones. It is harmful in contact with skin and is a skin sensitizer.

Eye irritation:

Causes serious eye damage.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Vinyl oximinosilane 2224-33-1	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
Aluminium powder (stabilised) 7429-90-5	LD50	> 15.900 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
3- (Trimethoxysilyl)propyla mine 13822-56-5	LD50	2.970 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
Aluminium powder (stabilised) 7429-90-5	LC50	> 5 mg/l	inhalation	4 h	rat	not specified

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Vinyl oximinosilane 2224-33-1	LD50	> 2.009 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)
3- (Trimethoxysilyl)propyla mine 13822-56-5	LD50	11.300 mg/kg	dermal		rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Aluminium powder (stabilised) 7429-90-5	not irritating	24 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:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Aluminium powder (stabilised) 7429-90-5	not irritating		rabbit	FDA Guideline
3- (Trimethoxysilyl)propyla mine 13822-56-5	highly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Vinyl oximinosilane 2224-33-1	Sensitizing	Guinea pig maximisa- tion test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Aluminium powder (stabilised) 7429-90-5	not sensitising	Draize Test	guinea pig	Draize Test
3- (Trimethoxysilyl)propyla- mine 13822-56-5	not sensitising	Guinea pig maximisa- tion 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
Vinyl oximinosilane 2224-33-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Vinyl oximinosilane 2224-33-1	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Aluminium powder (stabilised) 7429-90-5	positive	in vitro mammalian cell micronucleus test	without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
	positive	in vitro mammalian chromosome aberration test	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)
Aluminium powder (stabilised) 7429-90-5	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
	ambiguous	oral: gavage		rat	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)

Repeated dose toxicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Vinyl oximinosilane 2224-33-1	NOAEL=10 mg/kg	oral: gavage		rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

SECTION 12: Ecological information**General ecological information:**

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

Toxicity**Ecotoxicity:**

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

It is expected to be non hazardous to aquatic species.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Vinyl oximinossilane 2224-33-1	LC50	> 560 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
	NOEC	50 mg/l	Fish	14 d	Oryzias latipes	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
Vinyl oximinossilane 2224-33-1	EC50	201 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Vinyl oximinossilane 2224-33-1	EC50	94 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	30 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Vinyl oximinossilane 2224-33-1	NOEC	> 100 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Aluminium powder (stabilised) 7429-90-5	NOEC	> 100 mg/l	Fish	96 h	Salmo trutta	OECD Guideline 203 (Fish, Acute Toxicity Test)
3- (Trimethoxysilyl)propylamine 13822-56-5	LC50	1.264 mg/l	Fish		Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
3- (Trimethoxysilyl)propylamine 13822-56-5	EC50	302 mg/l	Daphnia		Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
3- (Trimethoxysilyl)propylamine 13822-56-5	EC 50	3.400 mg/l	Bacteria			OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Vinyl oximinossilane 2224-33-1	not readily biodegradable.	aerobic	26 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
3- (Trimethoxysilyl)propylamine 13822-56-5		aerobic	67 %	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)

Bioaccumulative potential / Mobility in soil

Mobility:

Cured adhesives are immobile.

Bioaccumulative potential:

Does not bioaccumulate.

Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB

Vinyl oximinasilane 2224-33-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Aluminium powder (stabilised) 7429-90-5	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
3-(Trimethoxysilyl)propylamine 13822-56-5	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

Section 13. Disposal considerations

Waste disposal of product: Dispose of in accordance with local and national regulations.

Disposal for uncleaned package: Disposal must be made according to official regulations.

Section 14. Transport information

General information:

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

Section 15. Regulations - classification and identification

Vinyl oximinasilane	OECD. Program to investigate the potential hazards of high production volume chemicals (HPV), including decisions on the need for further work.
Aluminium powder (stabilised)	India. List of Hazardous Chemicals (Manufacture, Storage and Import of Hazardous Chemical Rules, Schedule I (Part II)) MTCR (Missile Technology Control Regime) Annex, Category II, Item 4: Propellants & Chemicals Wassenaar Arrangement, Munitions List, Energetic Materials (ML8)
3-(Trimethoxysilyl)propylamine	OECD. Program to investigate the potential hazards of high production volume chemicals (HPV), including decisions on the need for further work.

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:

- R11 Highly flammable.
- R15 Contact with water liberates extremely flammable gases.
- R38 Irritating to skin.
- R41 Risk of serious damage to eyes.
- R43 May cause sensitisation by skin contact.
- R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

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.

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