Safety Data Sheet

LOCTITE SI 596 HIGH TEMP SIL SEALANT RED known as HIGH TEMP SIL SEALANT RED 85 G

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SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name: LOCTITE SI 596 HIGH TEMP SIL SEALANT RED known as HIGH TEMP SIL SEALANT RED 85 G

Intended use: Sealant

Supplier:

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SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture
Not classified as hazardous under the New Zealand Hazardous Substances and New Organisms Act (HSNO).
Not classified as Dangerous Goods under the Land Transport Rule: Dangerous Goods 2005.

GHS Classification:

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

General chemical description: Mixture
Type of preparation: Acetoxy curing silicone

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Silica, amorphous, fumed, crystal-free	112945-52-5	10- < 20 %
Hydrocarbon C11-25 dearomatized	64742-46-7	1- < 10 %
Diiron trioxide	1309-37-1	1- < 10 %
Non-hazardous ingredients~		remainder up to 100%

SECTION 4 FIRST AID MEASURES

Ingestion:	Do not induce vomiting. Seek medical advice.
Skin:	Rinse with running water and soap. Obtain medical attention if irritation persists.
Eyes:	Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.
Inhalation:	Move to fresh air. If symptoms persist, seek medical advice.
First Aid facilities:	Eye wash Normal washroom facilities
Medical attention and special treatment:	Treat symptomatically and supportively.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	Carbon dioxide, foam, powder Fine water spray
Decomposition products in case of fire:	carbon oxides. Silica fume
Special protective equipment for fire-fighters:	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.
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:	Use only in well-ventilated areas. Vapours should be extracted to avoid inhalation.
Conditions for safe storage:	Store in a cool, well-ventilated place. Never allow product to get in contact with water during storage

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Workplace exposure standards:

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Ceiling	STEL (ppm)	STEL (mg/m3)
Respirable dust (not otherwise classified) 112945-52-5	Respirable dust.		3	-	-	-
Inhalable dust (not otherwise classified)	Inhalable dust.		10	-	-	-
Oil mist, mineral 64742-46-7	Mist.	-	-	-		10
Oil mist, mineral	Mist.		5	-	-	-
Iron oxide dust and fume (Fe2O3), as Fe 1309-37-1	Dust and fume.		5	-	-	-

Biological Exposure Indices:
None

Engineering controls: Use only with adequate ventilation.

Eye protection: Wear protective glasses.

Skin protection:
The use of chemical resistant gloves such as Nitrile is recommended.
Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. If signs of wear and tear are noticed then the gloves should be replaced.

Respiratory protection: Use only in well-ventilated areas.
If inhalation risk exists, wear a respirator or air supplied mask complying with the requirements of AS/NZS 1715 and AS/NZS 1716.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Red
solid
Odor: Acetic acid medium
pH: Not applicable
Specific gravity: 1
Flash point: > 93 °C (> 199.4 °F)
(Tagliabue closed cup)
Lower explosive limit: 4 %(V)
(acetic acid)
Upper explosive limit: 19.9 %(V)
(acetic acid)
Vapor pressure: < 10 mm hg
(; 20 °C (68 °F))
Solubility in water: Insoluble
VOC content: 4.8 % 50.4 g/l

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid: Stable under normal conditions of storage and use.

Incompatible materials: Acids.
Bases.
Oxidizing agents.
Polymerises in presence of water.

Hazardous decomposition products: Acetic acid is liberated slowly upon contact with moisture.

Hazardous polymerization: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Health Effects:
Ingestion: Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.
Skin: May cause irritation.
Eyes: May cause mild irritation
Inhalation: Acetic acid produced during cure may irritate eyes, nose and throat.
Chronic effects: No chronic health effects are expected from the intended use of these products or from foreseeable handling of them in the workplace.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Silica, amorphous, fumed, crystal-free 112945-52-5	LD50 LC50 LD50	> 5,000 mg/kg > 58.8 mg/l > 2,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)
Hydrocarbon C11-25 dearomatized 64742-46-7	LD50 LC50 LD50	> 5,000 mg/kg > 5.266 mg/l > 2,000 mg/kg	oral inhalation dermal	4 h	rat rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) not specified OECD Guideline 402 (Acute Dermal Toxicity)
Diiron trioxide 1309-37-1	LD50 LC50	> 5,000 mg/kg > 5 mg/l	oral inhalation	4 h	rat rat	EU Method B.1 bis (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Silica, amorphous, fumed, crystal-free 112945-52-5	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Hydrocarbon C11-25 dearomatized 64742-46-7	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Diiron trioxide 1309-37-1	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Silica, amorphous, fumed, crystal-free 112945-52-5	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Hydrocarbon C11-25 dearomatized 64742-46-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Diiron trioxide 1309-37-1	not irritating	24 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Hydrocarbon C11-25 dearomatized 64742-46-7	not sensitising	in vivo	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Diiron trioxide 1309-37-1	not sensitising	Maurer optimisation test	guinea pig	Maurer Optimisation Test

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Silica, amorphous, fumed, crystal-free 112945-52-5	negative negative negative	bacterial reverse mutation assay (e.g Ames test) mammalian cell gene mutation assay in vitro mammalian chromosome aberration test	with and without with and without with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Hydrocarbon C11-25 dearomatized 64742-46-7	negative negative negative	mammalian cell gene mutation assay in vitro mammalian chromosome aberration test bacterial reverse mutation assay (e.g Ames test)	with and without with and without with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hydrocarbon C11-25 dearomatized 64742-46-7	negative negative negative	oral: unspecified intraperitoneal inhalation		mouse mouse mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test) OECD Guideline 483 (Mammalian Spermatogonial Chromosome Aberration Test)
Diiron trioxide 1309-37-1	negative negative negative	bacterial reverse mutation assay (e.g Ames test) in vitro mammalian chromosome aberration test mammalian cell gene mutation assay	with and without with and without with and without		not specified OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Diiron trioxide 1309-37-1	negative	oral: gavage		rat	other guideline:

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Silica, amorphous, fumed, crystal-free 112945-52-5	NOAEL=< 0.046 mg/l	inhalation	14 days6 hours/day, 5 days/week	rat	not specified
Silica, amorphous, fumed, crystal-free 112945-52-5	NOAEL=> 4,500 mg/kg	oral: feed	13 weeksdaily, continous	rat	
Hydrocarbon C11-25 dearomatized 64742-46-7	NOAEL=5,000 mg/kg	oral: gavage		rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Hydrocarbon C11-25 dearomatized 64742-46-7	NOAEL=10.4 mg/l	inhalation		rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Diiron trioxide 1309-37-1	NOAEL=0.0047 mg/l	inhalation: dust	13 w6h/d, 5d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Diiron trioxide 1309-37-1	NOAEL=> 1,000 mg/kg	oral: gavage	13 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

SECTION 12. ECOLOGICAL INFORMATION

General ecological information: Do not empty into drains / surface water / ground water.

Ecotoxicity: H412 Harmful to aquatic life with long lasting effects.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Silica, amorphous, fumed, crystal-free 112945-52-5	LC50	> 10,000 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	EL50	> 1,000 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	NOELR	10,000 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	EL50	> 10,000 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silica, amorphous, fumed, crystal-free 112945-52-5	EC0	10,000 mg/l	Bacteria	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption test)
Hydrocarbon C11-25 dearomatized 64742-46-7	LC50	> 10,000 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydrocarbon C11-25 dearomatized 64742-46-7	EL50	> 3,000 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Diiron trioxide 1309-37-1	LC50	Toxicity > Water solubility	Fish	96 h	Danio rerio	other guideline:
Diiron trioxide 1309-37-1	EC50	Toxicity > Water solubility	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Diiron trioxide 1309-37-1	EC50	Toxicity > Water solubility	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Diiron trioxide 1309-37-1	NOEC	Toxicity > Water solubility	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Diiron trioxide 1309-37-1	EC50	Toxicity > Water solubility	Bacteria	3 h	activated sludge of a predominantly domestic sewage	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Hydrocarbon C11-25 dearomatized 64742-46-7	readily biodegradable	aerobic	74 %	OECD Guideline 306 (Biodegradability in Seawater)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Silica, amorphous, fumed, crystal-free 112945-52-5	0.53					QSAR (Quantitative Structure Activity Relationship)

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal of product: Follow all local, state, federal and provincial regulations for disposal.
Cured rubber can be incinerated or landfilled following EPA and local regulations.

Disposal for uncleaned package: 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.

SECTION 14. TRANSPORT INFORMATION

Dangerous Goods information:

Land Transport:
Not classified as Dangerous Goods under the Land Transport Rule: Dangerous Goods 2005.

Marine transport IMDG:
Not dangerous goods

Air transport IATA:
Not dangerous goods

SECTION 15. REGULATORY INFORMATION

New Zealand regulatory information:
Not classified as hazardous under the New Zealand Hazardous Substances and New Organisms Act (HSNO).

HSNO Approval Number: NOT APPLICABLE

NZIoC: Compliant for NZIoC

SECTION 16. OTHER INFORMATION

Abbreviations/acronyms:
CAS: Chemical Abstracts Service
GHS: Globally Harmonized System
HSNO: Hazardous Substances and New Organisms
IATA : International Air Transport Association – Dangerous Goods Regulations
IMDG: International Maritime Dangerous Goods code
LC 50: Lethal Concentration 50%
LD 50: Lethal Dose 50%
STEL - Short term exposure limit
TWA - Time weighted average

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