

	VITAL TECHNICAL SDN. BHD.	 
	Safety Data Sheet	
	VT-151 / VT-151SE / VT-158 / VT-159 / VT-176 Vital Red RTV	

Issued date: 31/03/08

Revision date: 01/12/16

Revision No.: 4

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

Product name : VT-151 / VT-151SE / VT-158 / VT-159 / VT-176 Vital Red RTV

Product use : Silicone sealant

Company : Vital Technical Sdn. Bhd.
No. 93, Jalan Industri 3/3,
Rawang Integrated Industrial Park,
48000 Rawang, Selangor,
Malaysia.

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2. Hazard(s) identification

Substance/Mixture : Mixture

Hazard classification : Not classified as hazardous

Pictogram : Not classified as hazardous

Signal word : Not classified as hazardous

Hazard statement(s) : Not classified as hazardous

Precautionary statement(s):

P271	Use only outdoors or in a well-ventilated area.
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Other hazards which do not result in classification but contribute to overall hazards: None known

3. Composition/Information on ingredients

Chemical name	CAS No.	EINECS No.	%
Silicon dioxide	7631-86-9	231-545-4	1 - 10
Octamethylcyclotetrasiloxane	556-67-2	209-136-7	0.1 – 1.0

4. First-aid measures

In case of inhalation:




Remove to fresh air, keep warm and at rest. Contact physician if symptom persists.

In case of skin contact:

Remove contaminated clothing. Rinse with copious amount of water and soap. Get medical advice if skin irritation or a rash occurs. Wash clothing before reuse.

In case of eye contact:

Contact lenses should be removed. Rinse with copious amount of water immediately. Seek medical advice if eye irritation develops and persists.

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In case of ingestion:

DO NOT induce vomiting. Rinse mouth thoroughly with water. Get medical attention if a symptom persists.

Personal protection equipment for first-aiders:

Pay attention to any potential hazards and use recommended personal protection equipment if potential for exposure exists.

Most important symptoms and effects, acute and delayed:

None known.

5. Fire-fighting measures

Suitable extinguishing media:

Water, alcohol-resistant foam, carbon dioxide, dry chemical.

Unsuitable extinguishing media:

None known.

Specific firefighting procedures:

Remove undamaged containers from fire area if it is safe to do so. Use extinguishing media that is suitable to local circumstances and surrounding environment.

Special person protection equipment for firefighters:

NIOSH-approved self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Specific hazards arising from firefighting:

Exposure to combustion products may be a hazard to health.

Thermal decomposition products:

Carbon dioxide, carbon monoxide, and silicon oxides. At temperatures above 150 °C formaldehyde will form.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedure:

Use recommended personal protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

Measure for cleaning/collecting:

Wipe or soak with inert liquid binding material (sand, sawdust, etc.). Scrape away cured material. Dispose the spilt material according to local or national regulations. Section 13 of this safety data sheet provides information regarding certain local or national requirements.

Additional information:




Prevent spillage from entering drainage/sewer systems. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

7. Handling and storage

Handling:

Ensure good ventilation during use. Avoid contact with skin and eyes. Do not eat, drink, or smoke when using the product.

Storage:

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Ensure containers and cartridges are tightly closed. Store in a dry, well-ventilated area, and protected from direct sunlight with temperature not exceeding 30 °C. Keep away from incompatibles. Refer to section 10 for incompatible materials.

8. Exposure controls/personal protection

Components	CAS No.	Form of exposure (Value type)	Control Parameter	Basis
Silicon dioxide (inhalable particulate)	7631-86-9	8 hours TWA (Particulate matter containing no asbestos and <1% crystalline silica)	10 mg/m ³	Malaysia OSHA
Silicon dioxide (respirable particulate)	7631-86-9	8 hours TWA (Particulate matter containing no asbestos and <1% crystalline silica)	3 mg/m ³	Malaysia OSHA
Silicon dioxide	7631-86-9	8 hours TWA	80 mg/m ³ /(%SiO ₂)	US OSHA
Silicon dioxide (inhalable dust)	7631-86-9	8 hours TWA	6 mg/m ³	UK WEL
Silicon dioxide (respirable dust)	7631-86-9	8 hours TWA	2.4 mg/m ³	UK WEL
Silicon dioxide	7631-86-9	8 hours TWA (Particulate matter containing no asbestos and <1% crystalline silica)	2 mg/m ³	Safe Work Australia

Engineering controls:

Product curing may form hazardous compounds. Ensure adequate ventilation and minimise workplace exposure concentrations.

Industrial hygiene:

Remove immediately all contaminated clothing. Do not inhale vapour. Wash hands and contaminated areas with water and soap before leaving the work site. Change clothing before leaving workplace and wash before reuse. Do not eat, drink, or smoke while using product.

Hand protection:

Suitable impervious protective gloves (latex, nitrile, etc.). Breakthrough time is not tested for this product. Change gloves often if possible.




Respiratory protection:

A NIOSH-approved respirator with filter for organic vapours is recommended where local ventilation is not adequate.

Eye/Face protection:

Protective goggles/safety glasses.

9. Physical and chemical properties

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Appearance	: Thixotropic paste
Odour	: Acetic acid odour
Odour threshold	: Not determined
pH	: Not applicable
Freezing/Melting point	: Not determined
Boiling point range	: Not applicable
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability	: Not classified as flammable
Explosive properties	: Not classified as explosive
Oxidising properties	: Not classified as oxidising
Vapour pressure	: Not applicable
Vapour density	: Not applicable
Relative density	: 1.04
Solubility in water	: Not determined
N-octanol/water partition coefficient	: Not determined
Decomposition temperature	: Not determined
Viscosity	: Not applicable

10. Stability and reactivity

Reactivity:

No reactive hazards known.

Stability:

Stable under recommended handling and storage conditions.

Conditions to avoid:

Exposure to water/water vapour and humid air. Strong oxidising agents.

Hazardous reactions:

Hazardous polymerisation will not occur. Can react with strong oxidising agents. Acetic acid is formed after exposure to water or moisture in air. Hazardous decomposition products will be formed if used at elevated temperature.

Hazardous decomposition products:

Formaldehyde is formed at elevated temperature.

Incompatible materials:

Strong oxidising agents.




11. Toxicology information

No specific oral, inhalation or dermal toxicology data is known for this product. Any toxicological data included in this section is based on the data associated with the components.

Acute oral toxicity, LD₅₀ (rat):

Not classified based on available information and/or concentration of components.

Silicon dioxide	>3,300 mg/kg
Octamethylcyclotetrasiloxane	>4,800 mg/kg

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Acute dermal toxicity, LD₅₀ (rabbit):

Not classified based on available information and/or concentration of components.

Silicon dioxide	>5,000 mg/kg
Octamethylcyclotetrasiloxane	>2.5 ml/kg

Acute inhalation toxicity, LC₅₀ (4 hours, rat):

Not classified based on available information and/or concentration of components.

Silicon dioxide	> 2.08 mg/L
Octamethylcyclotetrasiloxane	2,975 ppm

Serious eye damage/eye irritation:

Not classified based on available information and/or concentration of components.

Silicon dioxide	Not eye irritant.
Octamethylcyclotetrasiloxane	Not eye irritant.

Skin corrosion/skin irritation:

Not classified based on available information and/or concentration of components.

Silicon dioxide	Not skin irritant.
Octamethylcyclotetrasiloxane	Not skin irritant.

Respiratory/Skin sensitisation:

Not classified based on available information and/or concentration of components.

Silicon dioxide	Not sensitising on skin.
Octamethylcyclotetrasiloxane	Not sensitising on skin.

Germ cell mutagenicity:

Not classified based on available information and/or concentration of components.

Silicon dioxide	Negative genotoxicity <i>in vitro</i> . Negative genotoxicity <i>in vivo</i> .
Octamethylcyclotetrasiloxane	Negative genotoxicity <i>in vitro</i> . Negative genotoxicity <i>in vivo</i> .




Carcinogenicity:

Not classified based on available information and/or concentration of components.

Reproductive toxicity:

Not classified based on available information and/or concentration of components.

Octamethylcyclotetrasiloxane	No effect on fertility and foetal development.
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Specific target organ toxicity – single exposure:

Not classified based on available information and/or concentration of components.

Octamethylcyclotetrasiloxane	Exposure by ingestion. No significant health effect at concentration of 100 mg/kg bw or less.
	Exposure by inhalation. No significant health effect at concentration of 1 mg/L/6 hrs/day or less.
	Exposure by skin contact. No significant health effect at concentration of 200 mg/kg bw or less.

Specific target organ toxicity – repeated exposure:

Not classified based on available information and/or concentration of components.

Octamethylcyclotetrasiloxane	Exposure by ingestion on rats.
	Exposure by inhalation on rats.
	Exposure by skin contact on rabbits.

Aspiration toxicity:

Not classified based on available information and/or concentration of components.

Octamethylcyclotetrasiloxane	Aspiration toxicity hazard.
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Likely route of administration:

Inhalation, skin contact, and ingestion.

12. Ecological information

Individual components of this mixture have been independently tested by the raw material suppliers and any known results have been presented below. The results for the individual components may not be representative of the ecological toxicity of this finished product. This finished product has not been tested to determine individual toxicological/ecological limits.

Ecology toxicity:

No adverse effect on aquatic organisms is predicted based on available information and/or concentration of components.

Octamethylcyclotetrasiloxane Toxicity to fish Toxicity to crustacean Toxicity to algae or other aquatic plants	Exposure for 96 hours, LC ₅₀ : >0.022 mg/L Exposure for 48 hours, LC ₅₀ : >0.015 mg/L Exposure for 72 hours, EC ₅₀ : 0.022 mg/L
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Persistence and degradability:

Not likely to be persistent based on available information and/or concentration of components.

Octamethylcyclotetrasiloxane	Not readily biodegradable. Exposure for 28 days, 3.7% biodegradation.
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Bioaccumulative potential:

No bioaccumulation potential based on available information and/or concentration of components.

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Octamethylcyclotetrasiloxane	Log K _{ow} : 6.48
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Mobility in soil:

No data available.

13. Disposal information

Waste treatment/disposal methods - unused products

Waste disposal must be in compliance with environmental protection requirements and local regulations.

Waste treatment/disposal methods - contaminated packaging

Dispose of as unused product. Empty container should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

Road transport (UNRTDG) : Not regulated as dangerous goods.
UN number : Not applicable
Proper shipping name : Not applicable
Technical name : Not applicable
Hazard class : Not applicable
Classification code : Not applicable
Packing group : Not applicable

Marine transport (IMDG) : Not regulated as dangerous goods.
UN number : Not applicable
Proper shipping name : Not applicable
Technical name : Not applicable
Hazard class : Not applicable
EmS : Not applicable
Packing group : Not applicable
Marine pollutant : Not applicable

Air transport (IATA) : Not regulated as dangerous goods.
UN number : Not applicable
Proper shipping name : Not applicable
Technical name : Not applicable
Hazard class : Not applicable
Packing group : Not applicable




15. Regulatory information

Safety, health, and environmental regulations specific for the hazardous chemical in question:

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2010 (Malaysia)

Occupational Safety and Health (Classification, Labelling, and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 (Malaysia)

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (European Union)

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Occupational Safety and Health Administration (OSHA) (2006) Air Contaminants. 29 CFR 1910.1000 (United States of America)

Work Health and Safety Act 2011 (Australia)

EH40/2005 Workplace exposure limits (United Kingdom)

Chemical inventory status:

- Australia AICS : All ingredients listed or exempt.
- Canada DSL : All ingredients listed or exempt.
- China IECSC : All ingredients listed or exempt.
- Korea KECI : All ingredients listed or exempt.
- Philippines PICCS : All ingredients listed or exempt.
- United States TCSA : All ingredients listed or exempt.

16. Other information

Definitions:

- TWA** : Time-weighted average.
- STEL** : Short-term exposure level.
- OSHA** : Occupational Safe and Health Act
- WEL** : Workplace exposure limits
- LD₅₀** : The minimum dose required for lethal effects in 50% of a given population of test specimens.
- ppm** : part per million
- bw** : body weight
- NOAEL** : No-observed-adverse-effect-level
- NIOSH** : National Institute for Occupational Safety and Health.
- UNRTDG** : United Nations Recommendations on the Transport of Dangerous Goods
- IMDG** : International Maritime Dangerous Goods
- IATA** : International Air Transport Association
- AICS** : Australian Inventory of Chemical Substances
- DSL** : Domestic Substance List
- IECSC** : Inventory of Existing Chemical Substances in China.
- KECI** : Korea Existing Chemicals Inventory.
- HSNO** : Hazardous Substance and New Organisms
- PICCS** : Philippines Inventory of Chemicals and Chemical Substances.
- TSCA** : Toxic Substances Control Act.

All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The details contained herein are based on our present state of knowledge and experience in characterising our product with regard to any possible safety requirement at the date of its publication. We do, however, pass them on without any warranty or property assurances.