

	<b>VITAL TECHNICAL SDN. BHD.</b>	  	<b>Issued date</b> : 31/03/08
	<b>Material Safety Data Sheet</b>		<b>Rev. No.</b> : 4
	<b>VT-210 High Performance Sealant</b>		<b>Revised date</b> : 29/04/13
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## 1. Identification of the substance/preparation and of the company/undertaking

**Product name** : VT-210 High Performance Sealant  
**Company** : Vital Technical Sdn. Bhd.  
 No. 93, Jalan Industri 3/3,  
 Rawang Integrated Industrial Park,  
 48000 Rawang, Selangor,  
 Malaysia.

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**Website** : http://www.vitaltechnical.com

## 2. Hazard(s) identification

### GHS-Labeling Regulation (EC) No. 1272/2008:

This product has not been classified as hazardous according to the legislation in force.

## 3. Composition/Information on ingredients

Chemical name	CAS No.	EINECS	% (w/w)	Toxicology Data
Ethyl methyl ketoxime	96-29-7	202-496-6	0.1 - 1.0	LD <sub>50</sub> oral (rat): 2.4 - 3.7 g/kg LD <sub>50</sub> dermal (rabbit): 1.0 - 2.0 g/kg LC <sub>50</sub> inhalation (rat, 4hr): 20 mg/L
N-(2-aminoethyl)-3-aminopropyl-trimethoxysilane	1760-24-3	217-164-6	0.1 - 1.0	LD <sub>50</sub> oral (rat): >2.2 g/kg LD <sub>50</sub> dermal (rabbit): >2.0 g/kg LC <sub>50</sub> inhalation (rat, 4hr): <2.44 mg/L
Methyl tri(ethyl methyl ketoxime) silane	22984-54-9	245-366-4	1 - 10	LD <sub>50</sub> oral (rat): >2.2 g/kg LD <sub>50</sub> dermal (rabbit): no data LC <sub>50</sub> inhalation (rat, 4hr): >4.8 mg/L
Distillates (petroleum), hydrotreated middle	64742-46-7	265-148-2	1 - 10	LD <sub>50</sub> oral (rat): >5.0 g/kg LD <sub>50</sub> dermal (rabbit): >2.0 g/kg LC <sub>50</sub> inhalation (rat, 4hr): 4.6 mg/L

## 4. First-aid measures

### Inhalation

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

### Skin contact

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

### Eye contact

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

### Ingestion

DO NOT induce vomiting. Drink plenty of water followed by milk if available. Never give anything by mouth to an unconscious person.

## 5. Fire-fighting measures

### Suitable extinguishing media

Foam, powder and carbon dioxide.

### Special fire fighting procedures

Keep up-wind to avoid fumes. Use NIOSH-approved self-contained breathing apparatus and full protective clothing.

### Unusual fire/explosion hazards

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None known.

**Thermal decomposition products**

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

**Protective measures in fire**

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

## 6. Accidental release measures

**Person-related safety precautions**

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

**Measure for cleaning/collecting**

Scrape, wipe or soak with inert liquid binding material (sand, diatomite, acid binders, universal binders, sawdust, etc). Dispose of contaminated material as waste according to item 13.

**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**

Sealant releases methyl ethyl ketoxime (MEKO) during application and curing therefore ensure good ventilation during use. Avoid contact with skin and eyes.

**Protection against fire/explosion**

General rules of fire prevention should be observed.

**Storage**

Keep containers and cartridges tightly closed and dry. Store in a well-ventilated area, protected from direct sunlight with temperature not exceeding 30 °C. Keep away from heat, sources of ignition and incompatibles.

## 8. Exposure controls/personal protection

**Industrial hygiene**

Remove immediately all contaminated clothing. Do not inhale vapor. Wash hands and contaminated areas with water and soap before leaving the work site. Change clothing before leaving workplace and wash before reuse.

**Hand protection**

Suitable protective gloves like rubber or plastic.

**Respiratory protection**

An organic respirator NIOSH-approved for organic vapors is recommended where local ventilation is not adequate.

**Eye protection**

Protective goggles/safety glasses with side shields.

## 9. Physical and chemical properties

- **Form** : Thixotropic paste
- **Odor** : Slight unique odor
- **Boiling temperature** : Not determined
- **Flash point** : 63 °C
- **Auto-ignition temperature** : 450 °C
- **Solubility in water** : Insoluble
- **Specific gravity** : 1.04
- **Vapor density** : Not determined
- **VOC Content** : <4 %(w/w)

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## 10. Stability and reactivity

### Stability and reactivity

Stable when stored under recommended conditions and no reactive hazards known.

### Conditions to avoid

None known.

### Hazardous decomposition products

During normal storage, hazardous decomposition will not occur. At higher temperature, thermal decomposition products will form. Refer to section 5.

### Hazardous polymerization

Hazardous polymerization will not occur.

### Incompatible materials

Moisture, strong acid and bases.

## 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.

<b>Test</b>	<b>Results</b>
Oral Toxicity (acute)	Not classified
Dermal Toxicity (acute)	Not classified
Inhalation Toxicity (acute)	Not classified
Eye Irritation	No data available
Dermal Irritation	No data available
Skin Sensitization	No data available
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified

### Additional notes

This product will release MEKO on curing or in contact with water/moisture. A lifetime (about two years) inhalation study in male and female mice and rats revealed that liver tumors were observed in male mice and rats at a high exposure level of 375 ppm.

## 12. Ecological information

<b>Ecology toxicity</b>	:	No adverse effect on aquatic organisms are predicted.
<b>Persistence/Degradability</b>	:	Not likely to present danger to terrestrial organisms.
<b>Bioaccumulative potential</b>	:	No bioaccumulation potential.
<b>Mobility</b>	:	No data available.

Individual components of this mixture have been independently tested by the raw material suppliers and any known results have been presented above. 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. Great caution should be taken to prevent release to the environment. See Section 13 for further information.

## 13. Disposal information

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Preferred method of disposal includes incineration under controlled conditions in accordance with all local and national laws and regulations. The generation of waste should be avoided or minimized wherever possible. Waste, even in small quantities, should never be poured down into drains, sewers or watercourses.

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## 14. Transport information

### Road transport (ADR)

Not regulated

### Marine transport (IMDG)

Not regulated

### Air transport (IATA)

Not regulated

## 15. Regulatory information

### Labelling according to EC Directives:

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

### Inventory Status:

All the components are listed in the Australia AICS, China IECSC, Europe EINECS, Japan ENCS, Korea KECI, Philippines PICCS and United States TSCA inventories.

## 16. Other information

### Definitions:

- **TLV** : Threshold Limit Value.
- **LD<sub>50</sub>** : The minimum dose required for lethal effects in 50% of a given population of test specimens.
- **NIOSH** : National Institute for Occupational Safety and Health.
- **AICS** : Australian Inventory of Chemical Substances
- **IECSC** : Inventory of Existing Chemical Substances in China.
- **EINECS** : European Inventory of Existing Commercial Chemical Substances.
- **ENCS** : Existing & New Chemical Substances.
- **KECI** : Korea Existing Chemicals Inventory.
- **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 characterizing our product with regard to any possible safety requirement. We do, however, pass them on without any warranty or property assurances.