	VITAL TECHNICAL SDN. BHD.	
	Safety Data Sheet	
	VT-843 **Threadlocker (Medium Strength - Blue)**	

Issued date: 10/03/09 **Revision date: 15/11/17** **Revision No.: 6**

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

Product name : VT-843 Threadlocker (Medium Strength - Blue)
Product use : Anaerobic adhesive

Company : Vital Technical Sdn. Bhd.
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2. Hazard(s) identification

Substance/Mixture : Mixture

Hazard classification : Eye Irrit.2

STOT SE 3

Pictogram : GHS07 Exclamation mark

Signal word : Warning

Hazard statement(s):

H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary statement(s):

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.

P403+P233	Store in a well ventilated place. Keep container tightly closed.
P405	Store locked up.

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.	%
Cumene hydroperoxide	80-15-9	201-254-7	1 - 10
Maleic acid	110-16-7	203-742-5	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.

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:
May cause eye irritation. May cause respiratory irritation.

5. Fire-fighting measures

Suitable extinguishing media:
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, nitrogen oxides, and other irritant gases.

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:
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

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 (neoprene, 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

Appearance	: Viscous liquid
Odour	: Mild odour
Odour threshold	: Not determined
pH	: Not applicable
Freezing/Melting point	: Not determined
Boiling point range	: Not determined
Flash point	: >93 °C
Evaporation rate	: Not applicable
Flammability	: Highly flammable
Explosive properties	: Not classified as explosive
Oxidising properties	: Not classified as oxidising
Vapour pressure	: Not applicable
Vapour density	: Not applicable
Relative density	: Approximately 1.05
Solubility in water	: Insoluble
N-octanol/water partition coefficient	: Not determined
Decomposition temperature	: Not determined
Viscosity	: 2,500 cPs

10. Stability and reactivity

Reactivity:
No reactive hazards known.

Stability:
Stable under recommended handling and storage conditions.

Conditions to avoid:
Avoid sources of ignition.

Hazardous reactions:
Hazardous polymerisation will not occur.

Hazardous decomposition products:
None known.

Incompatible materials:
Strong oxidising agents, acids, and sources of ignition.

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, LD_{50} (rat):
Not classified based on available information and/or concentration of components.

Cumene hydroperoxide	>2,000 mg/kg
Maleic acid	2,870 mg/kg

Acute dermal toxicity, LD_{50} (rabbit):
Not classified based on available information and/or concentration of components.

Cumene hydroperoxide	>500 mg/kg
Maleic acid	1,560 mg/kg bw

Acute inhalation toxicity, LC_{50} (4 hours, rat):
Not classified based on available information and/or concentration of components.

Cumene hydroperoxide	1,240 mg/m³
Maleic acid	>0.72 mg/L

Serious eye damage/eye irritation:
Classified as an eye irritant.

Cumene hydroperoxide	Causes eye irritation.
Maleic acid	Causes eye irritation.

Skin corrosion/skin irritation:
Not classified based on available information and/or concentration of components.

Cumene hydroperoxide	Corrosive on skin.
Maleic acid	Skin irritant.

Respiratory/Skin sensitisation:
Not classified based on available information and/or concentration of components.

Cumene hydroperoxide	Not sensitising on skin.
Maleic acid	Not sensitising on skin.

Germ cell mutagenicity:
Not classified based on available information and/or concentration of components.

Cumene hydroperoxide	Positive genotoxicity *in vitro*. Negative genotoxity *in vivo*.
Maleic acid	Positive genotocity *in vitro* without metabolic activation.

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

Cumene hydroperoxide	Results inconclusive.
Maleic acid	NOAEL: >100 mg/kg bw/day

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

Maleic acid	NOEL: 55 mg/kg bw/day

Specific target organ toxicity – single exposure:
Not classified based on available information and/or concentration of components.

Specific target organ toxicity – repeated exposure:
Classified as specific target organ toxicant.

Cumene hydroperoxide	Exposure by oral on rats for 7 weeks. At 19 mg/kg dose, 4/5 rats died.
	Exposure by inhalation on rats for 3 months. NOAEL: 31 mg/m³ or 5 ppm
Maleic acid	Exposure by oral on dogs for 90 days. NOEL: 60 mg/kg bw/day

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

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.

Cumene hydroperoxide Toxicity to fish Toxicity to crustacean Toxicity to algae or other aquatic plants	 Exposure for 48 hours, LC_{50}: 14 mg/L Exposure for 44 hours, EC_{50}: 18.84 mg/L Exposure for 72 hours, EC_{50}: 3.1 mg/L
Maleic acid Toxicity to fish Toxicity to crustacean Toxicity to algae or other aquatic plants	 Exposure for 48 hours, LC_{50}: 106 mg/L Exposure for 24 hours, EC_{50}: 160 mg/L Exposure for 72 hours, EC_{50}: 74.35 mg/L

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

Cumene hydroperoxide	Readily biodegradable. Exposure for 28 days, 99% biodegradation.
Maleic acid	Readily biodegradable. Exposure for 28 days, 97% biodegradation.

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

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)

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.
Japan ENCS	: 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
LD_{50}	**:** The minimum dose required for lethal effects in 50% of a given population of test specimens.
ppm	**:** part per million
bw	**:** body weight
BCF	**:** Bioconcentration factor
NOAEL	**:** No-observed-adverse-effect-level
LOAEL	**:** Lowest-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
ENCS	**:** Existing and New Chemical Substances.
KECI	**:** Korea Existing Chemicals Inventory.
ECSN	**:** Existing Chemical Substance Nomination.
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.