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	Material Safety Data Sheet		
	VT-138 Rapid Steel Putty		

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

Product name: : VT-138 Rapid Steel Epoxy

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

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2. Composition/information on ingredients

Chemical Name	EINECS	CAS No.	% (w/w)	Symbols & Health Risk Phrases
Epoxy resin (number average molecular weight 700)	500-033-5	25068-38-6	10 - 20	Xi; R36/38 R43
Reaction product of bisphenol-A-(epichlorohydrin)				N; R51-53

Further information:

This sheet only contains safety relevant data. For specific data, see Technical Data Sheet.

3. Hazards identification



Xi Irritant





N Dangerous for the environment

- **Signal word:** Danger
- May cause sensitization by skin contact.
- Irritating to eyes and skin.
- Toxic & Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.

4. First-aid measures

Avoid contact with skin and eyes. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

- Inhalation: Remove to fresh air, keep warm and at rest. Contact physician if discomfort continues.
- Skin contact: Remove contaminated clothing. Rinse with plenty of water. Contact physician if irritation persists.
- Eyes contact: Contact lenses should be removed. Rinse with plenty of water immediately, seek medical advice if necessary.
- Ingestion: Seek medical advice immediately. DO NOT induce vomiting. Drink plenty of water followed by milk if available. Never give anything by mouth to an unconscious person.

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5. Fire-fighting measures

- **Suitable extinguishing media:** This is not flammable products. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- **Special fire fighting procedures:** Keep up-wind to avoid fumes. Use self- contained breathing apparatus in confined areas.
- **Unusual fire/explosion hazards:** None known
- **Hazardous combustion products:** Carbon monoxide, carbon dioxide, oxides of nitrogen
- **Protective measures in fire:** 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:** absorb with liquid binding material (sand, diatomite acid binders, universal binders, and sawdust). Dispose of contaminated material as waste according to item 13.
- **Additional information:** Prevent spill 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 processing. When handling, do not eat, drink or smoke.
- **Protection against fire/explosion:** General rules of fire prevention should be observed.
- **Storage:** Keep syringe tightly closed and dry. Store in a well-ventilated area, protected from direct sunlight and heat.

8. Exposure controls/personal protection

- **Industrial hygiene:** Remove immediately all contaminated clothing. Do not inhale vapours. Wash hands and contaminated areas with water and soap before leaving the work site. Do not eat, drink or smoke when using the product. Change work clothing daily before leaving work place.
- **Hand protection:** Suitable protective gloves like nitrile or viton are recommended. The breakthrough time of the selected glove must be greater than the intended use period.
- **Resiratory protection:** An organic respirator NIOSH approved for organic vapors is recommended where local ventilation is not adequate.
- **Eye protection:** Protective goggles/ safety glasses.

9. Physical and chemical properties

Form :	Putty
Color :	Grey / Black
Odor :	Sulphur / Mercaptan
Boiling temperature :	Not determined
Decomposition temperature :	> 150 °C
Temperature resistance :	120 °C
Specific gravity (g/cc) :	2.26 ± 0.03
Flash point :	Does not ignite
Vapor density :	Not determined

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10. Stability and reactivity

- **Hazardous decomposition products:** Oxides of carbon and other toxic gases, nitrous gases. Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated Temperatures. Nitric acid in a fire. Nitrosamines. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic.
- **Hazardous reaction:** Will not occur. Avoid exposure to high temperatures or direct sunlight.
- **Incompatibilities:** Strong oxidizers, mineral and organic acids, reactive metals.

11. Toxicological information

Material	%	CAS No.	Test	Result	Route	Species
Bisphenol-A-(Epichlorhydrin) Number average molecular weight 700)	10 - 30	25068-38-6	LD50	11.4 g/kg	Oral	Rat

- **Skin:** May cause skin irritation in susceptible persons.
- **Eyes:** Corrosive to eyes and may cause severe damage including blindness. May cause eyes irritation in susceptible persons.
- **Sensitization:** May cause sensitization of susceptible persons by skin contact.
- **Chronic toxicity:** Chronic exposure may cause dermatitis. Repeated contact may cause allergic reactions in very susceptible persons.



12. Ecological information

- **Persistence/degradability:** No inherently biodegradable.
- **Mobility:** Water contaminating.
- **Ecology toxicity:** Harmful to aquatic organisms & may cause long-term adverse effects in the aquatic environment.

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 considerations

- **Product disposal:** 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. Untreated material is not suitable for disposal. Waste, even small quantities, should never be poured down drains, sewers or watercourses. Waste must be disposed of in accordance with federal, state and local environmental control regulations. This material, when properly mixed and cured with its resin component at the proper mix ratio, may be safely landfilled.

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14. Transport information

- **Proper shipping name:** Rapid Steel Epoxy
- **UN number:** Not regulated
- **Hazard class:** Not regulated
- **Packaging group:** Not regulated

Other: * Depending upon the size and type of container, this material may be reclassified as "Consumer Commodity, ORM-D" for shipments within the united states, or "Limited Quantity" elsewhere. Refer to the appropriate regulation.

15. Regulatory information

- **Contains:** Bisphenol-A-(Epichlorhydrin), Epoxy Resin
(Number average molecular weight 700)
- **Contains Environmental:** Bisphenol-A-(Epichlorhydrin), Epoxy Resin
(Number average molecular weight =700)

- **EEC symbols:**



Irritant, Harmful





Dangerous for the environment

- **Risk phrases:**

R36/38	Irritating to eyes and skin.
R43	May cause sensitization by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Safety phrases:**

S2	Keep out of the reach of children.
S24	Avoid contact with the skin.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S29	Do not empty into drains.
S35	This material and its container must be disposed in a safe way.
S37	Wear suitable gloves.
S46	If swallowed, seek medical advice immediately and show this label.
S57	Use appropriate containment to avoid environmental contamination.
S61	Avoid release to the environment. Refer to special instruction/safety data sheets.
S37/39	Wear suitable gloves and eye/face protection.

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16. Other information

Definitions :

EINECS: European Inventory of Existing Commercial Chemical Substances

TLV: Threshold Limit Value

LD50: Lethal Dose (50%)-The minimum dose required for lethal effects in 50% of a given population of test specimens.

NIOSH: National Institute for Occupational Safety and Health

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