

	VITAL TECHNICAL SDN. BHD.	 
	Technical Data Sheet	
	VT-145 Rapid Steel Epoxy	

Issuance date: 07/05/2021

Revision date: 14/10/2025

Revision No.: 25-01

Product Description

A rapid setting, general purpose, 1:1 mix ratio epoxy adhesive. It exhibits a remarkable combination of properties; fast setting, good resistance towards water, most solvents and automotive oils. It can be used as an adhesive on various substrates, to fill gaps and surface repairs. It does not shrink upon curing and does not crack if drilled. It can be handled after an hour.

Features

- 100% solid, no solvents
- Non-shrinking
- Excellent resistance against solvents and common automotive oils

Applications

Suitable for bonding metal, wood, plastic, china, ceramics, tools, and glassware.
Not suitable for bonding of polyethylene, polypropylene, PTFE and other flexible materials.

Directions

Surface preparation

1. Surfaces must be clean and dry.
2. Use solvent to wipe off any dust, dirt, grease, oil or water.
3. Roughen or abrade smooth surfaces to improve the adhesion strength.

Mixing

1. Turn nozzle end up and pull plunger back slightly. Snap off or cut off the storage cap.
2. Squeeze out equal amounts of resin and hardener on any disposable container or surface.
3. Mix thoroughly for one minute with the mixing stick provided.

Application

1. Apply a small amount of the adhesive on both surfaces immediately after mixing thoroughly, before it starts to gel.
2. Press together and wipe off any excess epoxy with acetone.
3. Support the bond for 15 - 30 minutes at room temperature.
4. Handling strength achieved in one hour and full cure strength in 24 hours.

Caution

Contains epoxy resin, polymercaptan hardener. May cause severe eyes and skin irritation. Avoid prolonged contact with eyes or skin. In case of contact with eyes, flush with water for 15 minutes and seek medical attention immediately. In case of skin contact, wipe off and wash with soap and water. Use in well ventilated areas.

KEEP OUT OF REACH OF CHILDREN.

Storage

Store in a dry and cool place. Not damaged by freezing. If frozen, warm to room temperature.

Technical Data:

Typical Uncured Properties

Base	Part A	: Epoxy resin
	Part B	: Polymercaptan hardener
Appearance	Part A	: Black paste
	Part B	: White paste
Viscosity¹	Part A	: 30,000 - 50,000 cPs

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	Part B	: 30,000 - 50,000 cPs
Specific Gravity ²	Part A	: 1.17- 1.19 g/mL
	Part B	: 1.12 – 1.14 g/mL
Mix ratio (R:H)	by weight	: 1:1
Mix ratio (R:H)	by volume	: 1:1
Working time (10 g, 25 °C) ³		: 3 minutes (depending on the adhesive amount and temperature)
Set time		: 4 minutes
Application temperature		: 15 - 35 °C (59 - 95 °F)
Time to handling strength		: 1 hours
Time to full strength		: 24 hours
Exotherm		: 60 - 80 °C (248 - 284 °F)
Shelf life		: 24 months from day of delivery (if stored correctly)

Typical Cured Properties

Colour	: Dark grey
Shore D hardness (1 day) ⁴	: 80 - 84

Rate of strength build up, single lap shear strength (anodised aluminium, etched)⁵
- 24 hours : ≥ 12.0 N/mm²

¹ Tested according to ASTM D2196 (LV4, 0.5 rpm).

² Measured according to modified ASTM D1875.

³ Tested according to DOTD TR 703-85 Method A.

⁴ Tested according to modified ASTM D2240 (Cylindrical sample; diameter = 51mm; thickness = 3mm).

⁵ Aluminium coupon prepared and tested according to ASTM D1002; surface treated according to ASTM D2651.

Order information

Code No.	Packaging size
VT-145	25ml / pack

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