	VITAL TECHNICAL SDN. BHD. **Technical Data Sheet** **VT-141 / VT-147 / VT-192V** **Rapid 3 Ton 4 Minutes Epoxy**	

Issuance date: 31/03/2008 **Revision date: 12/10/2021** **Revision No.: 21-01**

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 can be sanded, does not shrink upon curing and does not crack if drilled. IT cures clear can be handled after an hour.

Scan to learn how to use

Visit product page:
https://vitaltechnical.com/product/vt-141-vt-147-vt-192v-rapid-3-ton-4-minutes-epoxy/

Features

- 100% solid, no solvents
- Non-shrinking
- Fast setting
- Rapid strength development
- Good 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. Puncture tube with the cap and squeeze out equal amounts of resin and hardener on any disposable container or surface.
2. 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 6 hours.

Caution

Contains epoxy resin, polyamine and 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.

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Technical Data:

Typical Uncured Properties

Base	**Part A**	:	Epoxy resin
	Part B	:	Polymercaptan hardener
Appearance	**Part A**	:	Clear liquid
	Part B	:	Slightly yellowish clear liquid
Viscosity[1]	**Part A**	:	6,000 - 12,000 cPs
	Part B	:	9,000 - 15,000 cPs
Density[2]	**Part A**	:	approximately 1.16 g/mL (9.7 lb/gal)
	Part B	:	approximately 1.13 g/mL (9.4 lb/gal)
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 hour
Time to full strength		:	6 hours
Exotherm		:	100 - 130 °C (248 - 284 °F)
Shelf life		:	24 months from day of delivery (if stored correctly)

Typical Cured Properties

Colour	:	Clear to slightly yellowish
Shore D hardness (1 day)[4]	:	75 - 85

Rate of strength build up, single lap shear strength (anodised aluminium, etched)[5]

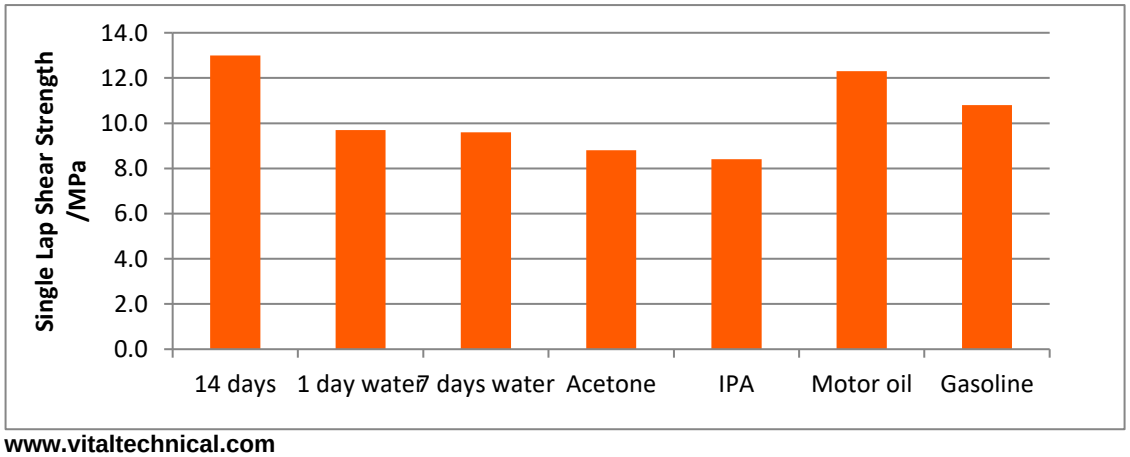
- 1 hour	:	~30% full strength, 4.2 ± 0.7 N/mm² (609 ± 101 psi)
- 4 hours	:	~90% full strength, 12.1 ± 0.8 N/mm² (1755 ± 116 psi)
- 6 hours	:	13.0 ± 0.4 N/mm² (1885 ± 58 psi)
- 1 day	:	13.1 ± 0.6 N/mm² (1900 ± 87 psi)
- 14 days	:	13.0 ± 0.5 N/mm² (1885 ± 72 psi)
- 28 days	:	13.2 ± 0.3 N/mm² (1914 ± 44 psi)

Solvent resistance, single lap shear strength (anodised aluminium, etched)[5]
7 days RT cure, immersion for 7 days

- Isopropanol	:	8.4 ± 0.6 N/mm² (1218 ± 87 psi)
- Acetone	:	8.8 ± 0.6 N/mm² (1276 ± 87 psi)
- Petrol	:	10.8 ± 1.1 N/mm² (1566 ± 160 psi)
- Motor oil	:	12.3 ± 1.0 N/mm² (1784 ± 145 psi)

Water resistance, single lap shear strength (anodised aluminium, etched)[5]
7 days RT cure

- 1 day immersion	:	9.7 ± 0.6 N/mm² (1406 ± 87 psi)
- 7 days immersion	:	9.6 ± 0.8 N/mm² (1392 ± 116 psi)

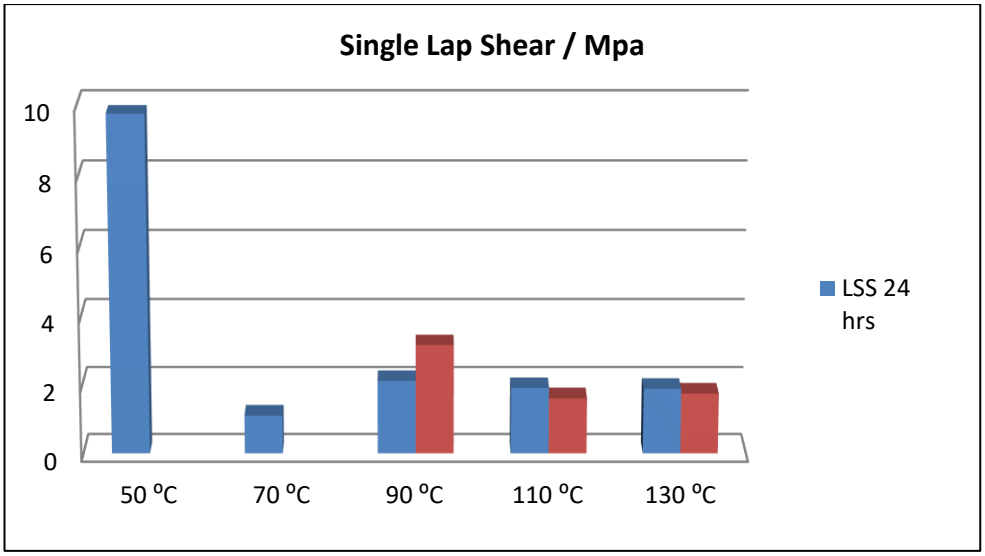


Heat resistant, single lap shear strength (anodised aluminium, etched)[5]
24 hours RT cure

- **50 ºC**	:	9.8 ± 0.7 N/mm² (1421 ± 101 psi)	Shore D	: 40
- **70 ºC**	:	1.1 ± 0.4 N/mm² (159 ± 58 psi)	Shore D	: 23
- **90 ºC**	:	2.1 ± 0.7 N/mm² (304 ± 101 psi)	Shore D	: 24
- **110 ºC**	:	1.9 ± 0.6 N/mm² (275 ± 87 psi)	Shore D	: 19
- **130 ºC**	:	1.9 ± 0.7 N/mm² (275 ± 101 psi)	Shore D	: 14

7 days RT cure

- **90 ºC**	:	3.2 ± 0.5 N/mm² (464 ± 72 psi)	Shore D	: 24
- **110 ºC**	:	1.6 ± 0.6 N/mm² (232 ± 87 psi)	Shore D	: 20
- **130 ºC**	:	1.8 ± 0.2 N/mm² (261 ± 29 psi)	Shore D	: 16



[1] Tested according to ASTM D2196 (LV3, 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-141	28.4 g/set
VT-1411K8	1.8 kg/set
VT-147	14 g/set
VT-192V	6 g x 6

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