

GL 172

Fast Cure Epoxy

Description

GL 172 is a one-part dark blue adhesive based on epoxy resins. When fully cured the surface is glossy, blush free and hard. It has very good scratch and water resistance. This system has enhanced adhesion and wets glass, ceramics, most plastics and metals well. The mixed epoxy has low viscosity to ensure good flow, good seepage into every corners and minimal trapping of bubbles. It is specially developed for low stress bonding, potting and encapsulation of electronic components.

Applications

One part dark blue epoxy for electrical and electronic devices

Guidelines for Use

1. Thaw the epoxy to room temperature (25 °C) before use.
2. The pot life is 2 hours. Processing the epoxy after the pot life may tend to trap bubbles.
3. Dispense the epoxy from the syringe.
4. The epoxy will harden in 24 hours a 25 °C. Full hardness will be achieved in 3 days. Faster curing can be achieved at elevated temperatures, eg. 70 °C for 30 minutes.

Properties

Property	Test Method	Unit	Typical Value
Chemical type			Epoxy
Appearance	Pen 10		Dark Blue Liquid
Shelf life, -40 °C	Pen 26	Month	12
Specific gravity			1.15
Pot life, 25 °C	Pen 57	Hour	1
Viscosity, CAP 2000+ viscometer, 25°C ,Cap-01 @5rpm	Pen 44	cps	21,040
Hardness, cured 25 °C for 24 hr	Pen 29	Shore D	85
Tensile strength	Pen	kgcm ⁻²	689
Flexural strength	Pen	kgcm ⁻²	1104
Flexural modulus	Pen	kgcm ⁻²	31,919
Lap shear strength	Pen	kgf	43
Compressive strength	Pen	kgcm ⁻²	2461
Water boil, wt gain, 24 hr	Pen 21	%	1.0
Dielectric constant, 100 Hz, 25 °C	Pen		6.0
Volume resistivity, 25 °C	Pen	ohm.cm	5.9 x 10 ¹³
Dissipation factor, 100 Hz, 25 °C	Pen		8.2 x 10 ⁻³
Tg, DSC, cured 25 °C for 7 days	Pen 19	°C	70
CTE before Tg	ppm/K		60
CTE after Tg	ppm/K		130
% Of Moisture Absorption	%		1.51

Recommended Cure

Schedule	Temp.	Cure Time
A	25 °C	24 hr
B	70 °C	30 min

Storage

Tightly close original syringe of unused product and store below -40 °C.

Packaging

- 1 ml EFD syringe

Environment, Health & Safety

This product is RoHS compliant. It does not contain any known carcinogenic, mutagenic or teratogenic components.

Contact Information

Penchem Technologies Sdn Bhd
(767120-A), 1015, Jalan Perindustrian Bukit Minyak 7, 14100 Penang, Malaysia
T: +604-501 5976, 77, 78
F: +604-501 5979
E: penchem@tm.net.my
W: www.penchem.com

Revision 5.23-May-16.Lye