

PT 497 Clear Potting Epoxy

Description

PT 497 is a two-part clear potting compound 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 potting and encapsulation of electronic components.

Applications

Clear potting or back-fill epoxy for electrical and electronic devices

Guidelines for Use

- Mix Part A resin and Part B hardener in the ratio of 3.0 : 1.0 by weight.
- The pot life is more than 60 minutes. Processing or pouring the mixed epoxy after 1 hour may tend to trap bubbles.
- The epoxy may be poured over the object, spread with a brush, or dispensed with a syringe.
- Blowing hot air over the surface of the epoxy can break any bubbles formed during mixing.
- Wipe off any excess uncured epoxy with a piece of dry cloth or tissue. Further cleaning may be achieved with tissue wetted with isopropanol (IPA).

Properties

Property	Test Method	Unit	Typical Value		
			Part A Resin	Part B Hardener	Mixed
Chemical type	-	-	Epoxy	Amine	
Appearance	Pen 10	-	Clear liquid	Clear Liquid	
Mix ratio, by weight	-	-	3.0	1.0	
Shelf life, 25°C	Pen 26	Month	12	12	
Pot life, 25°C	Pen 57	Hour			1
Viscosity, Brookfield RVT, 25°C	ASTM D2393	cP	15,600	30	860
Hardness, cured 25°C for 24 hr	Pen 29	Shore D			85
Density		g/cm ³			1.16
Tensile strength	Pen	MPa			56
Flexural strength	Pen	psi			14,900
Flexural modulus	Pen	psi			42,900
Compressive strength	Pen	psi			35,000
Water boil, wt gain, 24 hr	Pen 21	%			1.0
Dielectric strength, 100Hz, 23 °C	ASTM D149				4.5
Volume resistivity, 25°C	ASTM D257	ohm.cm			5.0 x 10 ¹⁵
Dissipation factor, 100Hz, 25°C					3.4 x 10 ⁻³
CTE 1		ppm/K			53
CTE 2		ppm/K			188
Tg, DSC, cured 25°C for 7 days	Pen 19	°C			95

- The epoxy will harden in 24 hours. Full hardness will be achieved in 3 days. Faster curing can be achieved at elevated temperatures, eg. 50° C for 3 hours.

Recommended Cure

Alternative cure	Temp. (°C)	Cure time
A	25	24 hr
B	80	2 hr

Storage

Tightly close original container of unused product. Store in a cool and dark place.

Packaging

- 1 kg plastic bottle
- 5 kg plastic bottle

Environment, Health & Safety

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

Contact Information

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