

EN 453

Clear COB Epoxy

Description

EN 453 is a one-part clear adhesive based on epoxy resins and curable by heat. It has great adhesion to most printed circuit boards and electronic components. It has good thermal shock properties. It has a long pot life and long shelf life even at room temperature of 25 °C. The thixotropy has been adjusted to control excessive overflow. It is recommended for protection of electronic chips where transparency of encapsulant is necessary for functional application or for inspection.

Properties

Property	Test Method	Unit	Typical Value
Chemical type			Epoxy
Appearance	Pen 10		White paste
Mix ratio, by weight			One component
Density			1.166
Shelf life, 5 °C	Pen 26	Month	6
Pot life, 25 °C	Pen 26	Week	1
Viscosity, CAP 2000+ viscometer, 25°C	Pen 44	cps	32,000
Hardness, cured 150 °C for 1 hr	Pen 29	Shore D	85
Shear strength	Pen	kgcm ⁻²	173
Dielectric constant, 100 Hz, 100 °C	ASTM D150		3.5
Volume resistivity, 25 °C	ASTM D257	ohm.cm	4.6 x 10 ¹⁶
Tg, DSC, cured 150 °C for 1 hr	Pen 19	°C	125
Thixotropy index			1.5

Applications

1. Sealing of electronic components like relays
2. Encapsulation of IC devices

Guidelines for Use

1. Thaw the epoxy to room temperature (25 °C) before use.
2. Dispense the epoxy by using a syringe.
3. Cure the epoxy by heating at 125 °C for 2 hour a convection oven.
4. Wipe off any excess uncured adhesive with a piece of dry cloth or tissue. Further cleaning may be achieved with tissue wetted with iso-propanol (IPA).

Recommended Cure

Schedule	Temp.	Cure Time
A	125 °C	2 hr

**The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

Storage

Tightly close original container of unused product and store below -20°C. Storing at lower temperatures down to -40°C may prolong shelf life beyond 6 months. However it may take longer time to thaw the product.

Packaging

- 30 ml EFD syringe
- 1 kg plastic jar
- 5 kg plastic pail
- 300 ml Semco cartridge

Environment, Health & Safety

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

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