

CB 644

High Speed SMT Epoxy

Description

CB 644 is a one-part black adhesive based on epoxy resins. It has excellent adhesion to most printed circuit boards and electronic components. It cures fast at high temperatures. It may be cured at 100°C or faster at 150°C. It has a long pot life and long shelf life even at room temperature of 25°C. The thixotropy has been adjusted to prevent sagging.

Applications

1. SMT adhesive for bonding electronic components onto printed circuit boards
2. General bonding for many plastics, ceramics and metals

Properties

Property	Test Method	Unit	Typical Value
Chemical type			Epoxy
Appearance	Pen 10		Black paste
Mix ratio, by weight			One component
Shelf life, -20°C	Pen 26	Month	6
Pot life, 25°C	Pen 26	Week	1
Viscosity, Brookfield RVT, 25 C	ASTM D2393	cps	5,500,000
Density		g/cm ²	1.135
Hardness		Shore D	85
CTE before Tg		Ppm/K	53
CTE after Tg		Ppm/K	235
Glass Transition Temperature		° C	109
Moisture Absorption(168 hours)		%	1.53
Water Absorption		%	0.92
Dielectric Breakdown		Volt/mm (μ A)	2884(0.02)
Tensile strength	Pen	kgcm ⁻²	475
Shear strength	Pen	kgcm ⁻²	135
Water boil, wt gain, 1 hr	Pen 21	%	0.43
Volume resistivity, 25°C	ASTM D257	ohm.cm	6.6 x 10 ¹⁶
Tg, DSC, cured 150°C for 1 hr	Pen 19	°C	131
Dot profile	Pen		Peaked

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 150°C for 90 seconds. Curing at lower temperature will require a longer time.
4. Wipe off any excess uncured adhesive with a piece of dry cloth or tissue. Further cleaning may be achieved with tissue wetted with isopropanol.

Recommended Cure

Schedule	Temp.	Cure Time
A	150 °C	5 min
B	120 °C	20 min
C	100 °C	30 min

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
- 30 ml IEI (Iwashita) syringe
- 300 ml Semco cartridge

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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