

CB 651 SMT Adhesive

Description

CB 651 is a one-part red 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 80°C or faster at 150°C. It has a long pot life and long shelf life even at room temperature of 25°C. It is loaded with glass beads as a spacer to give specific thickness for the bond line. 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

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.

Properties

Property	Test Method	Unit	Typical Value
Chemical type			Epoxy
Appearance	Pen 10		Red paste
Mix ratio, by weight			One component
Glass bead, size		mil	2-3
Shelf life, -20°C	Pen 26	Month	6
Pot life, 25°C	Pen 26	Day	3
Viscosity(Brookfield CAP 2000)		Cps	63000
Viscosity, Brookfield RVT, 25°C	ASTM D2393	Cps	6,000,000
Thixotropy Index		Cps	2.2
Density		g/cm ²	1.224
Hardness		Shore D	85
CTE before Tg		Ppm/K	57
CTE after Tg		Ppm/K	172
Glass Transition Temperature		°C	103
Moisture Absorption(168 hours)		%	1.14
Water Absorption		%	0.43
Dielectric Breakdown		Volt/mm (μ A)	3452(0.07)
Specific gravity, 25°C	Pen 14		1.22
Tensile strength	Pen 41	kgcm ⁻²	483
Shear strength	Pen 36	kgcm ⁻²	105
Water boil, wt gain, 1 hr	Pen 21	%	0.43
Tg, DSC, cured 150°C for 1 hr	Pen 19		124
Volume resistivity, 25°C	ASTM D257	ohm.cm	6.6 x 10 ¹⁶
Dot profile	Pen		Peak

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

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: enquiry@penchem.com
W: www.penchem.com

Revision 4.20-May-16.Lye