

EN 641

Black Encapsulant Epoxy

Description

EN 641 is a one-part black adhesive based on epoxy resins. The thixotropy is carefully adjusted to control excessive overflow. It has excellent adhesion to most printed circuit boards and electronic components. It is water resistant and provides good thermal shock properties. It has a long pot life and long shelf life even at room temperature of 25 °C. It has a nice satin surface when cured.

Applications

1. Encapsulation of ICs on printed circuit boards.
2. Encapsulation of smart card ICs.
3. Sealing of electronic and electrical 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 above 100 °C in 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 isopropanol (IPA).

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	9
Pot life, 25 °C	Pen 57	Week	1
Viscosity, CAP 2000+ Viscometer, Cap-06, 25°C	Pen 44	cps	30,000
Hardness, cured 120°C for 30 min	Pen 29	Shore D	95
Shear strength	Pen 36	kgcm ⁻²	140
Dielectric constant, 100 Hz, 100 °C	ASTM D150		3.8
CTE before Tg	Pen 64	ppm/K	46
CTE after Tg	Pen 64	ppm/K	148
Tg, DSC,cured 120°C/30mins	Pen 19	°C	112

Recommended Cure

Schedule	Temp.	Cure Time
A	100 °C	60 min
B	120 °C	30 min

Storage

Tightly close original container of unused product. Store below - 20 °C. Storing at lower temperatures down to - 40 °C may prolong shelf life beyond 9 months. However it may take longer time to thaw the product.

Packaging

- 30 ml EFD syringe
- 1 kg plastic jar
- 5 kg plastic pail

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 7.02-Jan-19.LH