

EN 690 Black Epoxy Sealant

Description

EN 690 is a fast cure, one-part black adhesive based on epoxy resins. It is specially formulated to provide great impact resistance and high strength when cured. The adhesive can be gelled and hardened fast within 7 minutes at 110°C in a convection oven. It does not contain volatile solvents, is water resistant, has great adhesion, and provides good thermal shock properties. It has very good adhesion to electronic parts, most plastics, ceramics and metals. The material has a smooth shiny surface when cured.

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 110°C for 1 hour a convection oven.
4. It is advisable not to leave the epoxy in the sealed can at >25°C for more than 3 days.
5. It is advisable to finish the epoxy within 2 days once opened.

Properties

Property	Test Method	Unit	Typical Value
Chemical type			Epoxy
Appearance	Pen 10		Black paste
Mix ratio, by weight			One component
Shelf life, 5°C	Pen 26	Month	6
Pot life, 25°C	Pen 26	Day	7
Specific gravity, 25°C	Pen 61		1.47
Viscosity, Brookfield CAP2000+, 25°C	Pen 44	cP	23,850
Thixotropic index, 1 rpm / 10 rpm	Pen 37		1.32
Flow, 45° incline, 110°C	Pen 13	cm	44
Gel time, 110°C	Pen 16	min	7
Boiling water, wt gain	Pen 21	%	1.66
Hardness, cured 110°C for 1 hr	Pen 29	Shore D	90
Shear strength	Pen 36	kgcm ⁻²	150
Tg, DSC, cured 100°C for 1 hr 110°C for 1 hr	Pen 19	°C	111
Cured surface appearance		-	Smooth, glossy
CTE before Tg	Pen 64	ppm/K	52
CTE after Tg	Pen 64	ppm/K	173
Storage Modulus 40°C	Pen 94	MPa	2,178
Loss Modulus 40°C	Pen 94	MPa	47
% of Moisture Absorption	Pen 92	%	<1%

Recommended Cure

Schedule	Temp.	Cure Time
A	110 °C	1 hr

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

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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