



TECHNICAL BULLETIN

EPOXICAST-1012M-3 THERMALLY CONDUCTIVE POTTING COMPOUND

EC-1012M-3 is a pourable, flame retardant, filled epoxy resin system featuring high thermal conductivity, good electrical insulation, and low shrinkage during cure. It is useful for potting and encapsulating components and modules where removal of heat and resistance to mechanical and thermal shock are prime considerations. Typical Applications includes potting or encapsulating densely packaged power supplies, integrated circuits, small transformers, capacitors bushings etc.

- will meet Flammability requirement for UL-94V-0
- Complies with “ROHS” requirements

TYPICAL HANDLING PROPERTIES:

Epoxicast	PART-A
Hardener	PART-B
Mix ratio (A/B): by weight	100/15
by volume	100/25
Viscosity at 25°C, cp	
PART-A (Resin)	80,000
PART-B (Hardener)	50-100
Mixed	4500
Pot life at 25°C (100 gram)	120 minutes
Recommended Cure	Gel @ 25°C + 3 hrs @ 65°C
Alternate Cure	24 to 48 hrs @ 25°C

TYPICAL CURED PROPERTIES:

(Tested @ 25°C unless otherwise indicated)

Color	Blue
Specific Gravity	1.75
Hardness, Shore D	84
Linear Shrinkage, %	0.12
Water Absorption, %	
24 hr immersion at RT	0.12
Thermal Conductivity, Btu.in/hr.°F.Ft ²	7.2
Service Temperature range, °C	-40 to 180
Glass Transition Temperature, °C	>75
Coefficient of Thermal Expansion, 10 ⁻⁶ /°C	
From -55°C to 25°C	29
Dielectric Strength, Volts/mil (3mm thickness)	440
Dielectric Constant at 1 kHz	3.8
Dissipation Factor at 1 kHz	0.02
Volume Resistivity, ohm-cm	1.0x10 ¹⁴

INSTRUCTIONS FOR USE:

Stir well the contents of each container every time before removing material. If the contents are hard or lumpy, warm to 80°C and mix thoroughly before removing material.

1. Mix 100 grams of PART-A to 15 grams of Hardener PART-B or 100 parts of PART-A to 25 parts of Hardener PART-B by volume.
2. Mix until uniform. Scrape the sides and bottom of container repeatedly during mixing.
3. Apply to clean bonding surfaces and cure as recommended to achieve the desired properties.
4. Typical cured properties were determined using recommended cure schedule. Some difference in properties may occur with the alternate or other cure schedules.

AVAILABILITY:

2 parts Kit - Packaged in Gallon, and 5-Gallon size

FOR INDUSTRIAL USE ONLY:

Practices of good housekeeping, safety and cleanliness should be followed before, during and after use.

WARNING!

Adequate ventilation of work place and ovens is essential. These materials may cause injury to the skin following prolonged or repeated contact and dermatitis in susceptible individuals. In case of skin contact, wash thoroughly with soap and water. For eyes, flush immediately with plenty of water for at least 10 minutes and seek medical attention. Refer to Material Safety Data Sheet (**MSDS**) for additional health and safety information.