



TECHNICAL BULLETIN

EC-1012M/EH-20M THERMALLY CONDUCTIVE POTTING COMPOUND

EC-1012M/EH-20M is a pourable, self-extinguishing, 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

TYPICAL HANDLING PROPERTIES:

Resin	EC-1012M
Hardener	EH-20M
Mix ratio by weight (Resin/Hardener)	100/10
Mixed viscosity at 25°C, cp	3000-6000
Pot life at 25°C (100 gram), hrs	4-5
Recommended Cure	3 hrs @ 65°C + 1 hr @ 130°C
Alternate Cure	24-48 hrs @ 25°C

TYPICAL CURED PROPERTIES:

(Tested @ 25°C unless otherwise indicated)

Color	Black
Specific Gravity	1.7
Hardness, Shore D	91
Linear Shrinkage, %	0.074
Water Absorption, %	
24 hr immersion at RT	0.1
Thermal Conductivity, W/mK	0.9
Service Temperature range, °C	-40 to 160
Glass Transition Temperature, °C	85
Coefficient of Thermal Expansion, 10 ⁻⁶ /°C	
Below Tg	38
Flexural Strength, psi	14,800
Flexural Modulus, psi	7x10 ⁵
Dielectric Strength (V/mil)	410
Dielectric Constant at 1 kHz	5.5
Dissipation Factor at 1 kHz	0.021
Volume Resistivity, ohm-cm	1.0x10 ¹⁵

INSTRUCTIONS FOR USE:

1. Mix EC-1012M thoroughly each time before removing material.
2. To each 100 grams of EC-1012M, add 10 grams of Hardener EH-20M and mix it well preferably using a mechanical mixer.
3. Vacuum degasses for about five minutes to remove any dissolved or entrapped air.
4. Proceed with the casting or potting application and cure as recommended.

FOR INDUSTRIAL USE ONLY:

These materials are intended for industrial use only, and the practices of good housekeeping, safety and cleanliness should be followed before, during and after use.

WARNING!

Although the system contains low volatility materials, care should be taken in handling. 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 for additional health and safety information.

SHELF LIFE:

The shelf life of these materials is greater than one year when stored in unopened containers at an average temperature of 25°C.