



ISO-9001-2015 Certified

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TECHNICAL BULLETIN

EPOXICAST™ EC-1031M-2 MACHINABLE CASTING AND POTTING COMPOUND

EC-1031M-2 is a filled epoxy resin system, which combines good handling characteristics with excellent cured properties. Its low viscosity allows good flowability and air release. Cured epoxy is readily machinable with standard cutting tools. It is useful for general purpose casting, potting or encapsulating intricate circuits, operational amplifiers, transformers, and other electric/electronic components.

TYPICAL HANDLING PROPERTIES:

Resin	Part A
Hardener	Part B
Mix ratio by weight, (Resin/Hardener)	100/100
Mix ratio by Volume, (Resin/Hardener)	100/100
Viscosity @ 25°C, cp	
Resin	30,000
Hardener	10,000
Mixed	20,000
Pot life at 25°C (100 gram), minutes	3-4 hrs
Recommended Cure	2 hrs @ 65°C
Alternate Cure	24 hrs @ 25°C

TYPICAL CURED PROPERTIES:

(Tested @ 25°C unless otherwise indicated)

Color	Black
Specific Gravity	1.55
Hardness, Shore D	78
Linear Shrinkage (%)	0.01
Water Absorption (24 hr at RT), %	0.75
Thermal Conductivity, W/mK	0.45
Service temperature range, °C	-55 to 125
Glass Transition Temperature, °C	45
Coefficient of Thermal Expansion, 10 ⁻⁶ /°C	
From -55°C to 25°C	95
From 25°C to 100°C	180
Flexural Strength, psi	15,500
Flexural Modulus, psi	4x10 ⁶
Dielectric Strength, Volts/mil	420
Dielectric Constant at 1 kHz	5.0
Dissipation Factor at 1 kHz	0.01
Volume Resistivity, ohm-cm	4x10 ¹⁵

INSTRUCTIONS FOR USE:

1. EC-1031M-2 should be stirred or agitated before use to ensure that all fillers are properly dispersed. To obtain the best cured properties; accurate proportioning and thorough mixing are essential.
2. Mix contents thoroughly each time before removing material.
3. To each 100 grams of Part A, add 100 grams of Part B and mix it well preferably using a mechanical mixer.
4. Vacuum degasses for about five minutes to remove any dissolved or entrapped air.
5. 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 workplace 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.

DISCLAIMER: All data given here is offered as a guide to the use of these materials and not as a guarantee of their performance. The user should evaluate their suitability for own purposes. Properties are typical and should not be used in preparing specifications. Statements are not to be construed as recommendations to infringe any patent.