



ISO-9001-2015 Certified

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TECHNICAL BULLETIN

EPOXICAST™ EC-1015LV-RT

THERMALLY CONDUCTIVE POTTING COMPOUND

EC-1015LV-RT is a low viscosity pourable filled epoxy resin system featuring high thermal conductivity, good electrical insulation, and low shrinkage during cure. It offers the excellent heat transfer, high voltage insulation and dimensional stability over a wide temperature range. As an encapsulant for power devices it distributes heat evenly throughout the casting, providing greater efficiency and longer working life. It is useful for potting and encapsulating densely packaged power supplies, integrated circuits, thick film hybrid devices, D/A converters, oscillators, amplifiers, relays, transformers and semiconductors etc.

TYPICAL HANDLING PROPERTIES:

Epoxicast	EC-1015LV
Hardener	EH-21
Mix ratio by weight, (Resin/Hardener)	100/10
Mixed viscosity at 25°C, cp	2000-3000
Pot life at 25°C (200 gram), minutes	40-60
Recommended Cure	24 hrs/25°C
Alternate Cure	2 hr/70°C

TYPICAL CURED PROPERTIES AFTER RECOMMENDED CURE:

(Tested @ 25°C unless otherwise indicated)

Color	Black
Specific Gravity	2.1
Hardness, Shore D	92
Linear Shrinkage (%)	0.3
Water Absorption (24 hr at RT), %	0.04
Thermal Conductivity, W/m ² K	1.4
Service temperature range, °C	-55 to 130
Glass Transition Temperature, °C	67
Coefficient of Thermal Expansion, 10 ⁻⁶ /°C	
From -55°C to 25°C	34
From 25°C to 70°C	49
Flexural Strength, psi	12,300
Flexural Modulus, psi	1.2x10 ⁶
Dielectric Strength, v/mil	510
Dielectric Constant at 1 kHz	4.2
Dissipation Factor at 1 kHz	0.003
Volume Resistivity, ohm-cm	1x10 ¹⁵

INSTRUCTIONS FOR USE:

1. EC-1015LV should be stirred or agitated without introducing excessive air before use to ensure that all fillers are properly dispersed.
2. To obtain the best cured properties; accurate proportioning and thorough mixing are essential.
3. Mix contents thoroughly each time before removing material.
4. To each 100 grams of Epoxicast-1015LV, add 10 grams of Hardener EH-21 and mix it well preferably using a mechanical mixer.
5. Vacuum degasses for about five minutes to remove any dissolved or entrapped air.
6. 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.

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.