

Leepoxy Plastics, Inc.

3706 W. Ferguson Rd., Fort Wayne, IN 46809
Phone (260) 747-7411 Fax: (260) 747-7413

TECHNICAL BULLETIN LEECAST E15095-2

Description

LEECAST E15095-2 is a two-part epoxy casting compound designed for encapsulation of high voltage components. It provides a system that is non-burning and highly resistant to thermal cycling with minimal effect on components.

Several modifications of Leepoxy's LEECAST E15095 are available for special needs. Their characteristics as compared to LEECAST E15095-2 are:

- E15095-0** Lower specific gravity; higher viscosity.
- E15095-1** Color in Part A.
- E15095-3** Lower viscosity.
- E15095-4** Faster cure; higher exotherm.

| TYPICAL PROPERTIES | | |
|-----------------------|------------|--------------|
| | Part A | Part B |
| Appearance | Tan liquid | Black liquid |
| Viscosity @ 25°C, cps | 300,000 | 25 |
| Density, lbs./gallon | 14.0 | 7.5 |
| Shelf life, months | 12 | 12 |

Handling and Mixing

LEECAST E15095-2 can be mixed, deaired and cast at normal ambient temperatures of 70 – 85°F. For lower viscosity, Part A can be warmed to

around 100°F before mixing. Preheating of the component to no more than 120°F will also aid in the filling of smaller components.

Measure out the proportionate quantities of Parts A and B and mix thoroughly, scraping the sides and bottom of the container. De-air using vacuum and pour the blended epoxy in the mold. Gel at room temperature for 4 – 6 hours, then post-cure for 1 hour at about 80°C.

| TYPICAL HANDLING PROPERTIES | | |
|----------------------------------|---|--------|
| | Part A | Part B |
| Mix Ratio, by weight | 100 | 8 |
| Gel time @ 25°C, 100 g, minutes. | 100 | |
| Work Life @ 25°C, min. | 60 | |
| Cure Schedule | Gel at room temperature for 4 – 6 hours, then post-cure 1 hour @ 80°C | |

Safety

Some individuals may be sensitive to epoxy compounds. Care should be taken to minimize contact. If skin contact occurs wash with soap and water. If eye contact occurs, flush with copious quantities of water.

Keep containers closed when not in use to prevent contamination. Minimize exposure to Part B to air and moisture.

| TYPICAL PERFORMANCE | |
|--|--------|
| Tensile Strength, psi | 9,800 |
| Compressive Strength, psi | 22,000 |
| Flexural Strength, psi | 14,500 |
| Hardness, Shore D | 91 |
| Shrinkage, % | 0.25 |
| Heat Deflection Temperature, °C | 95 |
| Coefficient of Expansion, (25 – 100°C) (in/in/°C x 10 ⁻⁶) | 30 |
| Specific Gravity, g/ml | 1.6 |
| Water Absorption, % | 0.05 |
| Flammability, U.L. 492 | SE-0 |

| TYPICAL ELECTRICAL PERFORMANCE | | |
|---------------------------------------|------------------|-------------------------|
| Parameter | Temp (°C) | Value |
| Volume Resistivity, ohm-cm | 25 | >2.0 x 10 ¹⁴ |
| | 80 | 4.4 x 10 ¹³ |
| | 100 | 1.1 x 10 ¹² |
| | 125 | 8.7 x 10 ¹⁰ |
| | 150 | 1.3 x 10 ¹⁰ |
| Dissipation Factor, 15K Hz | 25 | 0.017 |
| | 80 | 0.016 |
| | 100 | 0.016 |
| | 125 | 0.021 |
| | 150 | 0.019 |
| Dielectric Constant, 15K Hz | 25 | 5.25 |
| | 80 | 5.72 |
| | 100 | 5.85 |
| | 125 | 6.11 |
| | 150 | 6.30 |

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