TECHNICAL BULLETIN

EPOXCAST-1017-RT
THERMALLY CONDUCTIVE HIGH PERFORMANCE POTTING COMPOUND

EC-1017-RT is a highly filled, low viscosity, thermally conductive, heat curing epoxy system designed for potting and encapsulating of high voltage electrical/electronics components. It can cure at room temperature or in a relatively short time at elevated temperature. The cured system has a low coefficient of thermal expansion, high glass transition temperature, good dielectric properties and excellent chemical and solvent resistance.

TYPICAL HANDLING PROPERTIES:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resin</td>
<td>EC-1017</td>
</tr>
<tr>
<td>Hardener</td>
<td>EH-21</td>
</tr>
<tr>
<td>Mix ratio by weight, (Resin/Hardener)</td>
<td>100/6</td>
</tr>
<tr>
<td>Compound viscosity at 25°C, cp</td>
<td>300,000</td>
</tr>
<tr>
<td>Mixed viscosity at 25°C, cp</td>
<td>30,000</td>
</tr>
<tr>
<td>Pot life (100 gram) at 25°C, hrs</td>
<td>2</td>
</tr>
</tbody>
</table>

Recommended Cure: 2 hr/65°C
Alternate Cure: 24-48 hr/25°C

TYPICAL CURED PROPERTIES AFTER RECOMMENDED CURE:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>2.36</td>
</tr>
<tr>
<td>Hardness, Shore D</td>
<td>88</td>
</tr>
<tr>
<td>Linear Shrinkage (%)</td>
<td>0.21</td>
</tr>
<tr>
<td>Water Absorption (24 hr at RT), %</td>
<td>0.04</td>
</tr>
<tr>
<td>Thermal Conductivity, W/m°K</td>
<td>1.9</td>
</tr>
<tr>
<td>Glass Transition Temperature, (°C)</td>
<td>71</td>
</tr>
<tr>
<td>Coefficient of Thermal Expansion, 10^{-6}/°F</td>
<td></td>
</tr>
<tr>
<td>From -55°C to 25°C</td>
<td>18.4</td>
</tr>
<tr>
<td>Flexural Strength, psi</td>
<td>13,800</td>
</tr>
<tr>
<td>Flexural Modulus, psi</td>
<td>1.15x10^6</td>
</tr>
<tr>
<td>Dielectric Strength, Volts/mil</td>
<td>460</td>
</tr>
<tr>
<td>Dielectric Constant (1 kHz)</td>
<td>6.3</td>
</tr>
<tr>
<td>Dissipation Factor (1 kHz)</td>
<td>0.02</td>
</tr>
<tr>
<td>Volume Resistivity, ohm-cm</td>
<td>3x10^{15}</td>
</tr>
</tbody>
</table>

INSTRUCTIONS FOR USE:

EC-1017 contains fillers & should be stirred or agitated without introducing excessive air before use to ensure that all fillers are properly dispersed. To obtain the best cured properties; accurate proportioning and thorough mixing are essential.

1. Mix the contents thoroughly each time before removing material.
2. To each 100 grams of EC-1017, add 6.0 grams of Hardener EH-21 and mix it well preferably using a mechanical mixer.
3. Vacuum degasses for five minutes to remove dissolved and 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 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.