CC3-402

General Purpose Potting Resin

CC3-402 is a general purpose, mineral filled epoxy potting resin exhibiting low abrasion resistance. It is designed to be used where low viscosity and good wetting-out properties are important. Low shrinkage and good thermal shock resistance minimize stress on potted components. A choice of hardeners enable the CC3-402 to be cured either at room temperature or with heat. Even though the entire CC3-402 series offers a low percent of filler separation, it is advisable to always mix the contents in the shipping container prior to use.

ELECTRICAL AND PHYSICAL PROPERTIES:

Specific Gravity @ 25° C 1.5 to 1.6
Viscosity @ 25° C, cps 1,000 to 2,000
Thermal Conductivity: BTU/ft²/hr/F/in 2.3
Tensile Strength @ 25° C, psi 9,200
Compressive Strength @ 25° C, psi 43,700
Izod Impact: ft lbs/in of notch 0.32
Coefficient of Thermal Expansion: in/in° C x 10⁻⁶ 42
Heat Distortion: ‘C 85
Water Absorption: %, 7 days @ 25° C 0.3
Volume Resistivity @ 25° C, ohm-cm 10¹⁶
Dielectric Constant @ 25° C, 100 KC 3.9
Dissipation Factor @ 25° C, 100 KC 0.02
Dielectric Strength, volts/mil 450 to 500
Linear Shrinkage: in/in 0.004
Service Temperature, ‘C continuous -55 to +155

( Typical properties when cured with H-18 Hardener )

CHOICE OF HARDENERS:

H-1 Hardener: Rigid, good dimensional stability, fast cure.
H-7 Hardener: Resilient, excellent mechanical and thermal shock, low viscosity, good air release, fast cure.
H-18 Hardener: Resilient, excellent mechanical and thermal shock, low viscosity, good air release, fast cure.
Ancamine Z: Resilient, excellent mechanical and thermal shock, plus high heat distortion, long pot life.
H-10LV Hardener: Variable hardness, excellent impact properties, long pot life.
**CC3-402**

<table>
<thead>
<tr>
<th>HARDENER</th>
<th>PARTS BY WEIGHT PER 100 PARTS OF RESIN</th>
<th>POT LIFE 100 GRAM 25°C (77°F)</th>
<th>CURE TIME 25°C (77°F)</th>
<th>CURE TIME 65°C (149°F)</th>
<th>CURE TIME 125°C (257°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-1 Hardener</td>
<td>7.0</td>
<td>1 hr.</td>
<td>24 hrs.</td>
<td>2 hrs.</td>
<td>- - -</td>
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<tr>
<td>H-7 Hardener</td>
<td>14.5</td>
<td>2 hrs.</td>
<td>24 hrs.</td>
<td>2 hrs.</td>
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</tr>
<tr>
<td>H-18 Hardener</td>
<td>14.5</td>
<td>2 hrs.</td>
<td>24 hrs.</td>
<td>2 hrs.</td>
<td>- - -</td>
</tr>
<tr>
<td>Ancamine Z</td>
<td>10.2</td>
<td>4 hrs.</td>
<td>- - -</td>
<td>16 hrs.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>H-10LV Hardener rigid</td>
<td>20</td>
<td>3 hrs.</td>
<td>24 hrs.</td>
<td>3 hrs.</td>
<td>- - -</td>
</tr>
<tr>
<td>H-10LV Hardener semi-flex</td>
<td>43</td>
<td>3 hrs.</td>
<td>24 hrs.</td>
<td>3 hrs.</td>
<td>- - -</td>
</tr>
<tr>
<td>H-10LV Hardener flexible</td>
<td>65</td>
<td>3 hrs.</td>
<td>24 hrs.</td>
<td>3 hrs.</td>
<td>- - -</td>
</tr>
</tbody>
</table>

**ROOM TEMPERATURE CURE:**

H-1 Hardener: Cures overnight at room temperature or 2 hrs at 65°C. Do not heat cure if the mass exceeds 200 grams.

H-7 Hardener: Cures overnight at room temperature or 2 hrs at 65°C. Do not heat cure if the mass exceeds 200 grams.

H-18 Hardener: Cures overnight at room temperature or 2 hrs at 65°C. Do not heat cure if the mass exceeds 200 grams.

H-10LV Hardener: Cures overnight at room temperature or 3 hrs at 65°C. Do not heat cure if the mass exceeds 300 grams.

**HEAT CURE:**

Ancamine Z: Cures overnight at 65°C or 3 hrs at 125°C. For best physical and electrical properties, a slow cure for 16 hours at 65°C followed by a post cure for 3 hours at 125°C is recommended.

**MIXING INSTRUCTIONS:**

Mix CC3-402 thoroughly in it’s shipping container to insure a uniform consistency. Weigh out the desired amount of resin in a clean container. Add the hardener accurately by weight in the proper proportion as specified above. (ie. 7.0 grams of H-1 Hardener and 100 grams of CC3-402 for a total mix of 107.0 grams) Mix thoroughly. Use in a well ventilated area and avoid contact with eyes and skin.