CC3-402A-1

General Purpose, Thermally Conductive
UL-94V-0, Fire Retardant, Potting Resin

CC3-402A-1 is a general purpose, fire retardant 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 CC3-402A-1 to be cured either at room temperature or with heat. Even though the entire CC3-402A-1 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 at 25° C: 1.5
- Thermal Conductivity: W/mK: 1.12
- Tensile Strength @ 25° C, psi: 9,840
- Compressive Strength @ 25° C, psi: 41,000
- Izod Impact: ft lbs/in of notch: 0.32
- Coefficient of Thermal Expansion: in/in/°C x 10^-6: 31
- Heat Distortion: °C: 115
- Water Absorption: %, 7 days @ 25° C: 0.04
- Volume Resistivity @ 25° C, ohm-cm: 10^16
- Glass Transition Temperature: (Tg, °C): 125
- Dielectric Constant @ 25° C, 100 KC: 4.2
- Dissipation Factor @ 25° C, 100 KC: 0.02
- Dielectric Strength, volts/mil: 500
- Linear Shrinkage: in/in: 0.003
- Service Temperature, °C continuous: -55 to +130

( Typical properties when cured with H-16 Hardener )

CHOICE OF HARDENERS:

- H-1 Hardener: Rigid, good dimensional stability, fast cure.
- H-18 Hardener: Resilient, excellent mechanical and thermal shock, low viscosity, good air release, fast cure.
- H-16 Hardener: Rigid, good low temperature and high humidity application, fast cure.
- H-10LV Hardener: Variable hardness, excellent impact properties, long pot life
<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>
</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>H-16 Hardener</td>
<td>11.0</td>
<td>26 min.</td>
<td>1 hr.</td>
<td>30 min.</td>
<td>10 min.</td>
</tr>
<tr>
<td>H-10LV Hardener</td>
<td>rigid</td>
<td>20</td>
<td>3 hrs.</td>
<td>24 hrs.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H-10LV Hardener</td>
<td>semi-flex</td>
<td>43</td>
<td>3 hrs.</td>
<td>24 hrs.</td>
<td>3 hrs.</td>
</tr>
<tr>
<td>H-10LV Hardener</td>
<td>flexible</td>
<td>65</td>
<td>3 hrs.</td>
<td>24 hrs.</td>
<td>3 hrs.</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-18 Hardener: Cures overnight at room temperature or 2 hrs at 65°C. Do not heat cure if the mass exceeds 200 grams.

H-16 Hardener: Cures within 1 hour at room temperature or 30 minutes at 65°C. Do not heat cure if mass exceeds 100 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.

**MIXING INSTRUCTIONS:**

Mix CC3-402A-1 thoroughly in its 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. (i.e. 7.0 grams of H-1 Hardener and 100 grams of CC3-402A-1 for a total mix of 107.0 grams) Mix thoroughly. Use in a well ventilated area and avoid contact with eyes and skin.

* The data herein is offered as a guide and does not constitute a specification. Cast Coat, Inc. makes no warranty express or implied as to the accuracy or completeness. Each user should evaluate the material to determine its suitability for his/her particular purpose. User assumes all risk and liability resulting from its use.