



CC3-300

Tabular Alumina Filled Casting Resin

CC3-300 is a high viscosity, alumina filled casting resin offering high thermal conductivity, high heat distortion, excellent electrical insulation, low coefficient of thermal expansion and extremely low shrinkage during cure. It will withstand the most rugged tests of temperature, chemical attack and voltage shock, and is easier to fabricate than metals or ceramics at a lower cost. Supplied as a pourable resin, it cures to a rigid, opaque plastic at room temperature or with heat. The thermal coefficient of expansion is closely matched to aluminum. CC3-300 has excellent adhesion to a wide variety of materials, ie., metal, plastic, glass, ceramic. To reduce viscosity, warm the resin between 100' F to 150' F prior to adding the hardener.

SUGGESTED APPLICATIONS:

- Large Castings: CC3-300 is ideal for pouring large castings such as capacitor bushings, transformers or any unit where heat dissipation is important. Low shrinkage and low exotherm are two of the reasons why a two hundred pound casting can be made in a single pour.
- Small Castings: Even the intricate circuitry of a power supply can be encapsulated, void free with CC3-300, if both the amplifier and resin are preheated to 150' F prior to filling. We recommend evacuating the catalyzed resin before and after filling the unit.

ELECTRICAL AND PHYSICAL PROPERTIES:

| | |
|---|------------------|
| Specific Gravity at 25' C: (uncatalyzed) | 2.31 |
| (catalyzed) | 2.07 |
| Viscosity cps at 25' C: (uncatalyzed) 6-5-2000 | 120,400 |
| (catalyzed) 4-10-200 | 4,100 |
| Thermal Conductivity: W/mK | 1.7 |
| Tensile Strength @ 25' C, psi | 10,500 |
| Compressive Strength @ 25' C, psi | 29,050 |
| Izod Impact: ft lbs/in of notch | 0.25 |
| Coefficient of Thermal Expansion: in/in/'C x 10 ⁻⁶ | 22 |
| Heat Distortion: 'C | 155 |
| Water Absorption: %, 7 days @ 25' C | 0.18 |
| Volume Resistivity @ 25' C, ohm-cm | 10 ¹⁶ |
| Dielectric Constant @ 25' C, 100 KC | 6.0 |
| Dissipation Factor @ 25' C, 100 KC | 0.02 |
| Dielectric Strength, volts/mil | 600 |
| Linear Shrinkage: in/in | 0.0015 |
| Service Temperature, 'C continuous | -65 to +185 |

(Typical properties when cured with H-18 Hardener)



CC3-300

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-10LV Hardener: Variable hardness, excellent impact properties, long pot life

| HARDENER | PARTS BY WEIGHT PER 100 PARTS OF RESIN | | POT LIFE 100 GRAM 25°C (77°F) | CURE TIME | CURE TIME | CURE TIME |
|-----------------|---|----|-------------------------------------|-----------------|-------------------|----------------------|
| | | | | 25' C (77°F) | 65' C (149' F) | 125 ' C (257 ' F) |
| H-1 Hardener | 3.9 | | 2 hrs. | 24 hrs. | 2 hrs. | - - - |
| H-18 Hardener | 8.1 | | 3 hrs. | 24 hrs. | 2 hrs. | - - - |
| H-10LV Hardener | rigid | 9 | 3 hrs. | 24 hrs. | 3 hrs. | - - - |
| H-10LV Hardener | semi-flex | 24 | 3 hrs. | 24 hrs. | 3 hrs. | - - - |
| H-10LV Hardener | flexible | 38 | 3 hrs. | 24 hrs. | 3 hrs. | - - - |

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-10LV Hardener: Cures overnight at room temperature or 3 hrs at 65° C.

MIXING INSTRUCTIONS:

Mix CC3-300 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. 3.9 grams of H-1 Hardener and 100 grams of CC3-300 for a total mix of 103.9 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.