Cast-Coat inc.

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/ft^2/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	10^{16}
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

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