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EPOXY RESIN RBC #4100

RBC #4100 is a highly filled, thermally conductive epoxy resin designed for applications requiring excellent electrical insulation, high heat dissipation, and low shrinkage. This resin offers excellent resistance to filler settling during storage and may be heated to 140°F to reduce viscosity prior to catalyst addition. RBC #4100 can be cured at room temperature or elevated temperatures to fit a variety of applications. It can be used as heat sink for large castings or as an encapsulant for heat generating components.

HANDLING PROPERTIES:

Mixed Viscosity @ 25°C, cps	10,000
Shelf Life, (closed Container @ 25°C)	12 Months

PHYSICAL PROPERTIES (CURED):

Color	Black
Specific Gravity @ 25°C	1.98
Hardness, Shore D	92
Linear Shrinkage, in./in.	0.003
Moisture Absorption 10 Days @ 25°C, %	0.17
Izod Impact Strength, ft. lbs./in. of notch	0.30
Tensile Strength @ 25°C, psi	8,100
Compressive Strength @ 25°C, psi	28,000

THERMAL PROPERTIES (CURED):

Thermal Conductivity, cal/sec/cm ² /°C/cm X 10 ⁻⁴	29.4
Thermal Stability, 1000 Hrs. @ 175°C, % Wt. Loss	0.35
Coefficient of Thermal Expansion, in./in./°C X 10 ⁻⁶	26
Heat Distortion Temperature, °C	155
Operating Temperature Range, °C	-65 to 155

ELECTRICAL PROPERTIES (CURED):

Volume Resistivity @ 25°C, ohm-cm	4x10 ¹⁶
Dielectric Strength, volts/mil	470
Dielectric Constant @ 25°C, 100 KC	5.20
Dissipation Factor @ 25°C, 100 KC	0.018

The above properties are typical of a system cured with Hardener AB-312.

MIXING INSTRUCTIONS: Weigh the desired amount of #4100 Resin into a clean container and combine with recommended hardener in the proper ratio as shown below.

Hardener	Parts by wt. per 100 pts. resin	Pot Life 100 grms. @ 25°C.
A-110	4.7	1.5 hrs.
A-122	10.2	2 hrs
AB-312	11.0	5 hrs.

RECOMMENDED CURE SCHEDULE:

HARDENER	CURE@25°C	CURE@65°C	CURE@100°C	CURE@ 130°C
A-110	24 hrs.	2 hrs.	-	-
A-122	24 hrs.	2 hrs.	-	-
AB- 312	-----	6 hrs.	5 hrs.	3 hrs.