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♦ TECHNICAL BULLETIN ♦ TECHNICAL BULLETIN ♦ TECHNICAL BULLETIN ♦

## Epoxy Resin RBC #3400

RBC-3400 is a filled, low viscosity, general purpose epoxy potting resin (epoxy potting compound) and epoxy casting resin. Its physical and electrical properties are similar to RBC-3300 Resin, but RBC-3400 offers superior wetting characteristics when potting and encapsulating intricate components. It can be cured at room temperature or elevated temperatures, depending upon the epoxy hardener selected and the heat resistance of the part.

### HANDLING PROPERTIES:

Mixed Viscosity @ 25°C, cps	2,900
Shelf Life, (closed Container @ 25°C)	12 months

### PHYSICAL PROPERTIES (CURED):

Color	Black
Specific Gravity @ 25°C	1.45
Hardness, Shore D	85
Linear Shrinkage, in./in.	0.003
Moisture Absorption 10 Days @ 25°C, %	0.29
Izod Impact Strength, ft. lbs./in. of notch	0.29
Tensile Strength @ 25°C, psi	6,060
Compressive Strength @ 25°C, psi	17,300

### THERMAL PROPERTIES (CURED):

Thermal Conductivity, cal/sec/cm <sup>2</sup> /°C/cm X 10 <sup>-4</sup>	7.8
Thermal Stability, 1000 Hrs. @ 175°C, % Wt. Loss	0.50
Coefficient of Thermal Expansion, in./in./°C X 10 <sup>-6</sup>	39
Heat Distortion Temperature, °C	130
Operating Temperature Range, °C	-55 to 155

### ELECTRICAL PROPERTIES (CURED):

Volume Resistivity @ 25°C, ohm-cm	8x10 <sup>16</sup>
Dielectric Strength, volts/mil	475
Dielectric Constant @ 25°C, 100 KC	4.1
Dissipation Factor @ 25°C, 100 KC	0.022

(Note: The above properties are typical of a system cured with hardener #AB-312.)

### RECOMMENDED HARDENERS:

**AB-56:** A fast, room temperature curing system with good chemical and thermal properties.

**A-110:** A rigid, room temperature curing system with limited pot life and fast cure.

**A-120:** A resilient, low viscosity system with slightly longer pot life, that exhibits excellent resistance to thermal shock.

**AB-312:** Good resistance to heat, chemicals, thermal and mechanical shock, and good electrical properties at high humidity.

**MIXING INSTRUCTIONS:**

Weigh the desired amount of #3400 Resin into a clean container and combine with recommended hardener in one of the ratios shown below.

<b>Hardener</b>	<b>Parts by wt. per 100 pts. resin</b>	<b>Pot Life 100 grms. @ 25°C</b>
AB-56	25	25 min.
A-110	7	1 hr.
A-120	15	2 hrs.
AB-312	16	2 hrs.

**RECOMMENDED CURE SCHEDULE:**

<b>Hardener</b>	<b>Cure @ 25°C</b>	<b>Cure @ 65°C</b>	<b>Cure @ 100°C</b>	<b>Cure @ 130°C</b>
AB-56	24 HRS.	1 HR.	-	-
A-110	24 HRS.	2 HRS.	-	-
A-120	24 HRS.	2 HRS.	-	-
AB-312	-	6 HRS.	3 HRS.	2 HRS