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♦ **TECHNICAL BULLETIN** ♦ **TECHNICAL BULLETIN** ♦ **TECHNICAL BULLETIN** ♦

## EPOXY RESIN RBC #3500

RBC #3500 is a medium viscosity, filled casting resin offering low shrinkage and good machineability. It can be cured at room temperature or elevated temperatures depending upon the hardener selected and the properties required. The resin itself can be warmed slightly before the addition of hardener to facilitate mixing. With proper hardener selection, #3500 Resin can be used for very large as well as very small, intricate castings where good flowability and excellent air release are required.

### HANDLING PROPERTIES:

Mixed Viscosity @ 25°C, cps	4,400
Shelf Life, (closed Container @ 25°C)	12 Months

### PHYSICAL PROPERTIES (CURED):

Color	Black
Specific Gravity @ 25°C	1.60
Hardness, Shore D	90
Linear Shrinkage, in./in.	0.002
Moisture Absorption 10 Days @ 25°C, %	0.19
Izod Impact Strength, ft. lbs./in. of notch	0.40
Tensile Strength @ 25°C, psi	6,900
Compressive Strength @ 25°C, psi	28,700

### THERMAL PROPERTIES (CURED):

Thermal Conductivity, cal/sec/cm <sup>2</sup> /°C/cm X 10 <sup>-4</sup>	8.4
Thermal Stability, 1000 Hrs. @ 175°C, % Wt. Loss	0.50
Coefficient of Thermal Expansion, in./in./°C X 10 <sup>-6</sup>	29
Heat Distortion Temperature, °C	150
Operating Temperature Range, °C	-65 to 155

### ELECTRICAL PROPERTIES (CURED):

Volume Resistivity @ 25°C, ohm-cm	5x10 <sup>16</sup>
Dielectric Strength, volts/mil	475
Dielectric Constant @ 25°C, 100 KC	3.90
Dissipation Factor @ 25°C, 100 KC	0.018

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

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**RECOMMENDED HARDENERS:**

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 #3500 Resin into a clean container and combine with recommended hardener in the proper ratio as shown below.

<b>Hardener</b>	<b>Parts by wt. per 100 pts. resin</b>	<b>Pot Life 100 grms. @ 25°C.</b>
A-110	5.7	1 Hour
A-120	12.2	2 Hours
AB-312	13.0	4 Hours

**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>
A-110	24 Hrs.	2 Hrs.	-	-
A-120	24 Hrs.	2 Hrs.	-	-
AB-312	-	6 Hrs.	5 Hrs.	3 Hrs.