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♦ TECHNICAL BULLETIN ♦ TECHNICAL BULLETIN ♦ TECHNICAL BULLETIN ♦

## EPOXY RESIN RBC-3100

RBC-3100 is an unmodified, medium-viscosity resin used in potting and casting applications where a clear resin system is desirable. Depending on the hardener selected, #3100 Resin can be cured at room temperature or at elevated temperatures to obtain specific properties.

### HANDLING PROPERTIES:

Mixed Viscosity @ 25°C, cps	700
Shelf Life, (closed Container @ 25°C)	12 Months

### PHYSICAL PROPERTIES (CURED):

Color	Clear/Slight Amber
Specific Gravity @ 25°C	1.21
Hardness, Shore D	88
Linear Shrinkage, in./in.	0.024
Moisture Absorption 10 Days @ 25°C, %	0.21
Izod Impact Strength, ft. lbs./in. of notch	0.40
Tensile Strength @ 25°C, psi	12,100
Compressive Strength @ 25°C, psi	22,000

### THERMAL PROPERTIES (CURED):

Thermal Conductivity, cal/sec/cm <sup>2</sup> /°C/cm X 10 <sup>-4</sup>	5.0
Thermal Stability, 1000 Hrs. @ 175°C, % Wt. Loss	0.45
Coefficient of Thermal Expansion, in./in./°C X 10 <sup>-6</sup>	50
Heat Distortion Temperature, °C	150
Operating Temperature Range, °C	-55 to 170

### ELECTRICAL PROPERTIES (CURED):

Volume Resistivity @ 25°C, ohm-cm	6x10 <sup>15</sup>
Dielectric Strength, volts/mil	475
Dielectric Constant @ 25°C, 100 KC	4.3
Dissipation Factor @ 25°C, 100 KC	0.030

*The above properties are typical of a system cured with hardener B-711*

### RECOMMENDED HARDENERS:

A-110	A rigid, room temperature curing system with limited pot life and fast cure.
A-120, A-121	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.
B-711	Low viscosity heat cure hardener with excellent high temperature stability

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**MIXING INSTRUCTIONS:**

Weigh the desired amount of #3100 Resin into a clean container and combine with recommended Hardener in one of the ratios shown below:

<b>Hardeners</b>	<b>Parts by wt. per 100 pts. resin</b>	<b>Pot Life 100 grms. @ 25°C</b>
A-110	14	35-40 mins.
A-120, A-121	30	40-50 mins.
AB-312	32	3 hrs.
B-711	83	12-24 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>
A-110	24 hrs.	2 hrs.	-	-
A-120, A-121	24 hrs.	2 hrs.	-	-
AB-312	-	6 hrs.	3 hrs.	2 hrs.
B-711	-	-	1-2 hrs	1 hr.