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♦ TECHNICAL BULLETIN ♦ TECHNICAL BULLETIN ♦ TECHNICAL BULLETIN ♦

EPOXY RESIN RBC #4400

RBC #4400 is a filled, thermally conductive, medium viscosity epoxy resin similar to #4100 and #4300 in its handling properties and operating characteristics. This product exhibits excellent adhesive properties which make it useful for bonding thermally conductive or heat generating components. It offers excellent chemical resistance and maintains superior bonding strength over varying operating conditions. It can be cured at room temperature or at elevated temperature depending upon the properties required.

HANDLING PROPERTIES:

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

PHYSICAL PROPERTIES (CURED):

Color	Black
Specific Gravity @ 25°C	1.70
Hardness, Shore D	90
Linear Shrinkage, in./in.	0.003
Moisture Absorption 10 Days @ 25°C, %	0.22
Izod Impact Strength, ft. lbs./in. of notch	0.31
Tensile Strength @ 25°C, psi	9,400
Compressive Strength @ 25°C, psi	25,300

THERMAL PROPERTIES (CURED):

Thermal Conductivity, cal/sec/cm ² /°C/cm X 10 ⁻⁴	25.5
Thermal Stability, 1000 Hrs. @ 175°C, % Wt. Loss	0.35
Coefficient of Thermal Expansion, in./in./°C X 10 ⁻⁶	27
Heat Distortion Temperature, °C	155
Operating Temperature Range, °C	-65 to 155

ELECTRICAL PROPERTIES (CURED):

Volume Resistivity @ 25°C, ohm-cm	5x10 ¹⁶
Dielectric Strength, volts/mil	480
Dielectric Constant @ 25°C, 100 KC	5.8
Dissipation Factor @ 25°C, 100 KC	0.018

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

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 #4400 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	2 Hours
A-120	10.0	3 Hours
AB-312	11.0	5 Hours

RECOMMENDED CURE SCHEDULE:

HARDENER	CURE@25°C	CURE@65°C	CURE@100°C	CURE@130°C
A-110	24 Hrs.	2 Hrs.	---	---
A-120	24 Hrs.	2 Hrs.	---	---
AB-312	---	6 Hrs.	5 Hrs.	3 Hrs.



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