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♦ TECHNICAL BULLETIN ♦ TECHNICAL BULLETIN ♦ TECHNICAL BULLETIN ♦

EPOXY RESIN RBC #4501

RBC-4501 is a low viscosity, **UL listed** epoxy for **94 V-O** flame retardancy. It is designed for applications where thermal conductivity, excellent electrical insulation, high heat distortion and superior thermal shock properties are required. RBC-4501 can be cured at room temperature or elevated temperature to fit a variety of applications. It can be used as a heat sink for large castings or as an encapsulant for heat generating components. AB-56 hardener can be used for applications requiring fast cures.

HANDLING PROPERTIES:

Mixed Viscosity @ 25°C,cps	9,500
Shelf Life, (closed Container @ 25°C)	12 Months

PHYSICAL PROPERTIES (CURED):

Color	Black
Specific Gravity @ 25°C	1.44
Hardness, Shore D	87
Linear Shrinkage, in./in.	0.004
Moisture Absorption 24 hr. water boil, %	1.3
Izod Impact Strength, ft. lbs./in. of notch	0.25
Tensile Strength @ 25°C, psi	6,300
Compressive Strength @ 25°C, psi	15,950

THERMAL PROPERTIES (CURED):

Thermal Conductivity, cal/sec/cm ² /°C/cm X 10 ⁻⁴	30
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	53
Operating Temperature Range, °C	-65 to 130

ELECTRICAL PROPERTIES (CURED):

Volume Resistivity @ 25°C, ohm-cm	5x10 ¹⁶
Dielectric Strength, volts/mil	480
Dielectric Constant @ 25°C, 100 KC	5.7
Dissipation Factor @ 25°C, 100 KC	0.018

The above properties are typical of a system cured with Hardener AB-56

RECOMMENDED HARDENERS:

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

A-121 A resilient, low viscosity system with slightly longer pot life, that exhibits excellent resistance to thermal shock.

MIXING INSTRUCTIONS: Weigh the desired amount of RBC-4501 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.
AB-56	20.0	15-30 Minutes
A-121	12.0	3 Hours

RECOMMENDED CURE SCHEDULE:

HARDENER CURE	@25°C	CURE@65°C	CURE@100°C	CURE@130°C
AB-56	6 Hrs.	10 Min.	---	---
A-121	24 Hrs.	3 Hrs.	2 Hrs.	1 Hr.