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♦ TECHNICAL BULLETIN ♦ TECHNICAL BULLETIN ♦ TECHNICAL BULLETIN ♦

EPOXY RESIN RBC-3400 FR

RBC-3400 FR is a low viscosity, **UL listed** epoxy for **94 V-O** flame retardency. It is designed for applications where thermal conductivity, excellent electrical insulation, high heat distortion and superior thermal shock properties are required. RBC-3400 FR 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.

HANDLING PROPERTIES:

Mixed Viscosity @ 25°C,cps	6,600
Shelf Life, (closed Container @ 25°C)	12 Months

PHYSICAL PROPERTIES (CURED):

Color	Black/any
Specific Gravity @ 25°C	1.48
Hardness, Shore D	88
Linear Shrinkage, in./in.	0.003
Moisture Absorption 24 hr. @25 °C, %	0.23
Izod Impact Strength, ft. lbs./in. of notch	0.27
Tensile Strength @ 25°C, psi	8,375
Compressive Strength @ 25°C, psi	19,320

THERMAL PROPERTIES (CURED):

Thermal Conductivity, cal/sec/cm ² /°C/cm X 10 ⁻⁴	27.3
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	125
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-312

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

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RBC #3400FR (cont'd)

MIXING INSTRUCTIONS: Weigh the desired amount of RBC-3400 FR 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 per 100 grms. @ 25°C.
AB-56	20.0	1 Hour
A-121	12.0	3 Hours
AB-312	13.0	2 Hours

RECOMMENDED CURE SCHEDULE:

HARDENER	CURE@25°C	CURE@65°C	CURE@100°C	CURE@130°C
AB-56	24 Hrs.	1 Hr.	---	---
A-121	24 Hrs.	3 Hrs.	2 Hrs.	1 Hr.
AB-312	---	3 Hrs.	2 Hrs.	1 Hr.

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