



# 50-3150

## FLAME RETARDANT THERMALLY CONDUCTIVE EPOXY RESIN; UL94 V-0 LISTED

### DESCRIPTION:

50-3150 FR has been formulated to meet the stringent non-burning requirements of UL94 V-0. 50-3150 FR Black Epoxy with Catalyst 190 and Catalyst 30 are listed with Underwriter's Laboratory for passing UL94 V-0. This system offers excellent heat transfer, low shrinkage, and outstanding insulation properties.

50-3150FR with Catalyst 30 has a UL (746B) **Relative Temperature Index (RTI) rating of 130°C.**

50-3150FR Black with Catalyst 190 **passes NASA's outgassing requirements** per ASTM E595-07.

Typical applications for 50-3150 FR include encapsulating power supplies, transformers, coils, insulators, sensors, etc... This system is an excellent choice for applications requiring high thermal conductivity and flame retardancy.

### TYPICAL SPECIFICATIONS:

Viscosity @ 25°C cps, Resin	60,000
Mixed with Cat. 190	28,000
Mixed with Cat. 30	17,000
Mixed with Cat. 150	1,500
Specific Gravity, 25°C	1.6
Hardness, Shore D	90
Color	Black
Tensile Strength, psi	9,850
Linear Shrinkage, in/in	.002
Operating Temp. Range, °C	-60 to +200
Dielectric Strength, V/mil	485
Dielectric Constant at 60 Hz	5.6
Volume Resistivity, ohm-cm, 25°C	$1.5 \times 10^{15}$
Dissipation Factor, 60 Hz	.015
Thermal Conductivity, W/m- °K	2.16
Compressive Strength, psi	15,000
Coefficient of Expansion, in/in °F	$1.4 \times 10^{-5}$
Heat Distortion, °C	155
Outgassing (with Cat. 190)	
%TML	.50
%CVCM	.01

**INSTRUCTIONS FOR USE:**

- A. With Catalyst 190 listed with UL 94 V-0 (room temperature curing):
1. By weight, thoroughly mix 5 parts Catalyst 190 to 100 parts 50-3150 FR resin.
  2. Degas and pour. Cure at room temperature for 12-24 hours at 25°C ambient.
- B. With Catalyst 30 listed with UL 94 V-0 and RTI Rating of 130°C (Heat curing - Recommended for higher operating temperature and physical property applications):
1. By weight, thoroughly mix 10 parts Catalyst 30 to 100 parts 50-3150 FR resin.
  2. Pour and cure according to one of the following recommended cure schedules:
    - a) 85°C (185°F) 3-4 hours
    - b) 100°C (212°F) 2-3 hoursFor optimum performance, an additional 2 hours @ 365°F (185°C) is recommended.
- C. With Catalyst 150 (room temperature/heat curing):
1. By weight, thoroughly mix 17 parts Catalyst 150 to 100 parts 50-3150 FR resin.
  2. Degas and pour. Cure at room temperature for 24 hours or for 2-3 hours at 35-40°C.

**IMPORTANT:**

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