

50-3150 FR 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 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
Specific Gravity, 25℃	1.6
Hardness, Shore D	90
Color	Black
Tensile Strength, psi	9850
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℃	1.5 x 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 x 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 ℃ ambient.
- B. With Catalyst 30 listed with UL 94 V-0 (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 hours

For 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℃.

IMPORTANT:

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05/14