EPOXIES
INNOVATIVE BONDING SOLUTIONS ETC.

TECHNICAL BULLETIN

# 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℃ 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℃ | $1.5 \times 10^{15}$ |
| Dissipation Factor, 60 Hz | .015 |
| Thermal Conductivity, W/m- ℃K | 2.16 |
| Compressive Strength, psi | 15,000 |
| Coefficient of Expansion, in/in ℉ | $1.4 \times 10^{-5}$ |
| Heat Distortion, °C | 155 |
| Outgassing (with Cat. 190) | |
| %TML | .50 |
| %CVCM | .01 |

epoxies.com
21 Starline Way
Cranston, RI 02921 USA
t 401.946.3004
f 401.946.5526

EPOXIES
INNOVATIVE BONDING SOLUTIONS ETC.

TECHNICAL BULLETIN

## 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℃ (185℉) 3-4 hours
      b) 100℃ (212℉) 2-3 hours
      For optimum performance, an additional 2 hours @ 365℉ (185℃) 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:



05/14

epoxies.com
21 Starline Way
Cranston, RI 02921 USA
t 401.946.3004
f 401.946.5526