

50-3167FRGR

THERMALLY CONDUCTIVE FLAME-RETARDANT EPOXY RESIN

DESCRIPTION:

50-3167FRGR is a two-part epoxy that offers excellent heat transfer, low shrinkage, and outstanding insulation properties. Based on internal testing, it conforms to the UL 94 V-0 standard.

This system is an excellent choice for applications requiring high thermal conductivity and flame retardancy. Typical applications include potting and encapsulating power supplies, transformers, and other high voltage applications.

FEATURES:

- Low mix viscosity
- Flame retardant (conforms to UL 94 V-0)
- Lower filler settling

TYPICAL PROPERTIES:

Viscosity, cps, 25°C	
Resin 50-3167RFRGR	150,000
Catalyst Cat.12CL	10
Mixed	3,500
Color	Gray
Hardness, Shore D	90
Mix Ratio by Weight	100:10
Pot Life, hours	4
Operating Temperature Range, °C	-60 to +200
Specific Gravity, 25 °C	
Resin 50-3167RFRGR	1.87
Catalyst Cat.12CL	0.95
Mixed	1.75
Dielectric Constant	
at 25 kHz	3.72
at 1 MHz	3.62
Dissipation Factor	
at 25 kHz	0.026
at 1 MHz	0.018
Dielectric Strength, V/mil, AC	311
Volume Resistivity at 25 °C, ohm-cm	4.51×10^{15}



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Lap shear, psi, Aluminum to Aluminum	340
Tensile Strength, psi	6900
Coefficient of Expansion, below T _g , 1/K	48
Glass Transition Temperature, °C	61
Specific Heat Capacity, J/Kg·K	1.15
Thermal Conductivity, W/m·K	0.95

INSTRUCTIONS FOR USE:

1. Thoroughly mix components separately since some settling of fillers may occur.
2. By weight, thoroughly mix 100 parts resin to 10 parts Catalyst 12.
3. Degas, pour, and cure according to one of the following schedules:
 - a) 25 °C 24-48 hours
 - b) 65 °C 4-6 hours

PREPARATION OF SURFACES:

Surfaces to be bonded must be clean and grease free. Adhesion can be substantially increased by abrading the surface with a material like emery cloth or sandpaper. A roughened porous surface will produce the best results. Any oxidized metal films should be removed just prior to application of the adhesives.

STORAGE & HANDLING:

50-3167FRGR should be stored at room temperature. The expected shelf life is 12 months in original unopened containers.

Please read the Safety Data Sheet before using this or any other chemical.

AVAILABILITY:

50-3167RFRGR is available in quarts, gallons, and 5-gallon pails.

IMPORTANT:

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