



50-3100R

HIGH THERMAL K HEAT TRANSFER EPOXY RESIN

DESCRIPTION:

50-3100R is designed for the fastest and most continuous high heat transfer. 50-3100R measures heat dissipation several times faster than other commercially available types. The most important breakthrough is the handling of 50-3100R. This system can be easily mixed and poured to form a dimensionally stable heat transfer package.

Typical applications include encapsulation of power supplies, transformers, coils, insulators, protective covering for chips, or temperature probes.

TYPICAL PROPERTIES:

Viscosity, cps, 25 °C

50-3100R Resin	180,000
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Mixed with Cat.190CL	32,000
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Mixed with Cat.150CL/ Cat.154CL	6,000
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Mixed with Cat.30TB	29,000
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Available Colors

Black, Gray, Off-White

Hardness, Shore D

90

Operating Temperature Range with Cat.30, °C

-60 to +205

Specific Gravity, 25 °C

2.0

Cat.190CL Catalyst	0.99
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Cat.150CL/ Cat.154 Catalyst	0.95
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Cat.30TB Catalyst	1.0
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Compressive Strength, psi

15,000

Linear Shrinkage, in/in

0.003

Tensile Strength, psi

8,800

Dielectric Strength, V/mil

485

Dielectric Constant at 60 Hz

6.4

Dissipation Factor, 60 Hz

0.015

Volume Resistivity, ohm-cm

1.5×10^{15}

Coefficient of Expansion, °C

30×10^{-6}

Heat Distortion, °C

120

Thermal Conductivity, W/m·K

2.16



INSTRUCTIONS FOR USE:

Note: Mix 50-3100R resin thoroughly to re-disperse fillers. Some settling during transit or storage is common.

- A. Catalyst 190: 45-minute pot life. Tough and rigid at all temperatures up to 150 °C.
 1. By weight, thoroughly mix 100 parts 50-3100R resin to 5 parts Catalyst 190.
 2. Degas, pour, and cure according to one of the following recommended cure schedules:
 - a) 25 °C 24 Hours
 - b) 65 °C 2 Hours
- B. Catalyst 30: 4-hour pot life. Excellent for thermal and mechanical shock. Recommended for higher operating temperature applications.
 1. By weight, thoroughly mix 100 parts 50-3100R resin to 9 parts Catalyst 30.
 2. Degas, pour, and cure according to one of the following recommended cure schedules:
 - a) 85 °C 3-4 Hours
 - b) 100 °C 2-3 Hours
- C. Catalyst 150/154: 30-minute pot life. Low viscosity with excellent adhesion. Service temperature of up to 150 °C. Will soften slightly above 121 °C.
 1. By weight, thoroughly mix 100 parts 50-3100R resin to 12 parts Catalyst 150 or 154.
 2. Degas, pour, and cure according to one of the following recommended cure schedules:
 - a) 25 °C 24 Hours
 - b) 65 °C 2 Hours

STORAGE, HANDLING, & SAFETY:

Store both components at 25 °C in original containers. The expected shelf life is 12 months in original containers.

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

AVAILABILITY:

This product is available in quarts and gallons and as black (50-3100RBK), gray (50-3100RGR), or off-white (50-3100NP).

IMPORTANT:

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