

50-3100

HIGH THERMAL K HEAT TRANSFER EPOXY RESIN

DESCRIPTION:

50-3100 is designed for the fastest and most continuous high heat transfer. 50-3100 measures several times faster heat dissipation than other commercially available types. The most important breakthrough is the handling of 50-3100. 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, temperature probes, etc...

CHOICE OF CURING AGENTS:

CATALYST 190: Room temperature curing with a 45 minute pot life. Tough and rigid at all temperatures up to 150°C.

CATALYST 150: Room temperature curing with a 30 minute pot life. Low viscosity and easy handling properties. Excellent adhesion. Has a service temperature up to 150C (300°F). Will soften slightly above 121°C (250°F).

CATALYST 30: Heat curing with a pot life of 4 hours. Low viscosity with excellent handling properties. Excellent thermal and mechanical shock. Recommended for higher operating temperature applications.

TYPICAL SPECIFICATIONS:

Viscosity @ 25°C, cps, Resin	180,000
Viscosity @ 25°C (Cat.190) cps	32,000
Viscosity @ 25°C (Cat.150) cps	6,000
Viscosity @ 25°C (Cat.30) cps	29,000
Specific Gravity, 25°C/25°C, Resin	2.0
Hardness, Shore D	90
Linear Shrinkage, in./in.	.003
Tensile Strength, psi	8,800
Compressive Strength, psi	15,000
Operating Temp. Range, °C	-60 to +205
Coefficient of Expansion, °C	30×10^{-6}
Dielectric Strength, V/mil	485
Dielectric Constant at 60 Hz	6.4
Volume Resistivity, ohm-cm	1.5×10^{15}
Dissipation Factor, 60 Hz	.015
Heat Distortion, °C	120
Thermal Conductivity, W/m- °K	2.16



INSTRUCTIONS FOR USE:

A. WITH CATALYST 190

1. By weight, thoroughly mix 5 parts Catalyst 190 to 100 parts 50-3100 resin.
2. Degas and pour, cure at room temperature for 24 hours @ 25°C ambient or for 2 hours at 66°C (155°F).

B. WITH CATALYST 30 (Recommended for higher operating temperature and physical property applications):

1. By weight, thoroughly mix 9 parts Catalyst 30 to 100 parts 50-3100 resin.
2. Degas and pour, 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

1. By weight, thoroughly mix 12 parts Catalyst 150 to 100 parts 50-3100 resin.
2. Degas and pour, cure for 24 hours at room temperature or for 2 hours at 66°C (155°F).

IMPORTANT:

EPOXIES, ETC. MAKES NO EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY, FITNESS OR OTHERWISE WITH RESPECT TO ITS PRODUCTS. The information in this brochure is based on data obtained by our own research and is considered reliable. However, no warranty is expressed or implied regarding the accuracy of these data, the results to be obtained from the use thereof, or that any such use will not infringe any patent. The properties given are typical values and are not intended for use in preparing specifications. This information is furnished upon the condition that the person receiving it shall make his own tests to determine the suitability thereof for his particular purpose.

05/14