20-3651 EPOXY RESIN

DESCRIPTION:

20-3651 is a filled epoxy casting, potting, and encapsulating resin system. This system exhibits excellent physical, thermal, and electrical insulation properties. 20-3651 is easily machined and exhibits outstanding adhesion to metals, ceramics, and plastics.

When cured with Catalyst #105, this versatile epoxy system meets the requirements of MIL-I-16923 for Types B, C, and D. 20-3651 when cured with Catalyst #190 and Catalyst #105 meets NASA's outgassing requirements.

TYPICAL SPECIFICATIONS:

Viscosity Resin, 25°C cps	220,000
Specific Gravity, 25°C/25°C	1.65
Hardness, Shore D	88
Cure Shrinkage, in/in	.0015
Tensile Strength, psi	9,000
Compressive Strength, psi	16,000
Operating Temp. Range,°C	$^{-}65$ to $^{+}160$
Dielectric Strength, Volts/Mil	450
Dielectric Constant at 60 HZ	4.8
Volume Resistivity, OHM-CM	5×10^{16}
Dissipation Factor, 60 HZ	.02
Water Absorption, % (24 HR.)	.10
Thermal Conductivity, BTU/hr/ft^2/°F/in.	4.6
Thermal Expansion Coefficient, /°C	40×10^{-6}
Flexural Strength, psi	15,000
Outgassing	
%TML (Catalyst 190)	0.39
(Catalyst 105)	0.50
% CVCM (Catalyst 190)	0.01
(Catalyst 105)	0.01
%WVR (Catalyst 190)	0.16
(Catalyst 105)	0.12

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INSTRUCTIONS FOR USE:

A. ROOM TEMPERATURE CURING WITH CATALYST 190:

Catalyst 190 is designed for applications requiring a room temperature curing system with excellent physical and electrical insulation properties.

1. By weight, thoroughly mix 6-7 parts Catalyst 190 to 100 parts 20-3651 resin.
2. By volume, thoroughly mix 11 parts Catalyst 190 to 100 parts 20-3651 resin.
3. Pour and allow to cure according to one of the following schedules:

25°C	16-24 Hours
45°C	4-6 Hours
65°C	1-2 Hours

B. ROOM TEMPERATURE CURING WITH CATALYST 150

Catalyst 150 is low in viscosity and has a long pot life. It is excellent for thermal shock, impact resistance and low temperature properties.

1. By weight, thoroughly mix 20 parts Catalyst 150 to 100 parts 20-3651 resin.
2. By volume, thoroughly mix 34 parts Catalyst 150 to 100 parts 20-3651 resin.
3. Pour and cure at room temperature overnight or for 2 hours @ 66°C (155°F).

C. HEAT CURING WITH CATALYST 105:

Catalyst 105 is designed for applications requiring the optimum in electrical insulation, physical, and thermal properties up to 165°C.

1. By weight, thoroughly mix 8 parts Catalyst 105 to 100 parts 20-3651 resin.
2. By volume, thoroughly mix 13 parts Catalyst 105 to 100 parts 20-3651 resin.
3. Pour and allow to cure according to one of the following schedules:

80°C	8-16 Hours
100°C	2-4 Hours
120°C	30-60 Minutes

A post cure of 4-16 hours at the highest expected use temperature is recommended.

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IMPORTANT:

The information in this brochure is based on data obtained by our own research and is considered accurate. 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. 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.

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