

20-3651\40 EPOXY RESIN

DESCRIPTION:

20-3651\40 is a filled epoxy casting, potting, and encapsulating resin system. This is a lower viscosity version of the 20-3651. This system exhibits excellent physical, thermal, and electrical insulation properties. 20-3651\40 is easily machined and exhibits outstanding adhesion to metals, ceramics, and plastics. The Flame Retardant version is 20-3651\40 FR.

20-3651\40 FR when cured with Cat. 105 is UL Listed as meeting the stringent requirements of UL94 V-O.

When cured with Catalyst #105, this versatile epoxy system meets the requirements of MIL-I-16923 for Types B, C, and D.

TYPICAL SPECIFICATIONS:

	CAT.190	CAT.105	CAT.145
Viscosity Resin, 25°C cps	32,500	---	---
Mixed Viscosity, 25°C cps	10,000	4,000	2,000
Specific Gravity, 25°C/25°C, mixed	1.44	1.45	1.40
Hardness, Shore D	88	88	85
Cure Shrinkage, in\in	.0015	.0015	.0015
Tensile Strength, psi	6,100	9,200	6,300
Compressive Strength, psi	19,300	15,500	17,500
Operating Temp. Range, °C	-40 to +130	-55 to +155	-65 to +105
Dielectric Strength, Volts/Mil	450	450	450
Dielectric Constant at 1MHZ	3.9	3.8	3.8
Volume Resistivity, OHM-CM	10 ¹⁵	>10 ¹⁴	>10 ¹⁴
Dissipation Factor, 1MHZ	.06	.02	.07
Water Absorption, %(24Hr.)	0.3	0.1	0.3
Thermal Conductivity, BTU/hr/ft ² /°F/in.	4.6	4.6	4.6
Thermal Expansion Coefficient, 1°C	48x10 ⁻⁶	45x10 ⁻⁶	60.5x10 ⁻⁶
Flexural Strength, psi	12,000	14,000	10,000
Outgassing			
%TML	0.31	0.55	---
%CVCM	0.03	0.01	---

INSTRUCTIONS FOR USE:

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 8-9 part Catalyst 190 to 100 parts 20-3651\40 Resin.
By volume, thoroughly mix 12 part Catalyst 190 to 100 part 20-3651\40 Resin.
2. 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

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 10-11 part Catalyst 105 to 100 parts 20-3651\40 Resin
By volume, thoroughly mix 14 parts Catalyst 105 to 100 parts 20-3651\40 Resin.
2. 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.

ROOM TEMPERATURE CURING WITH CATALYST 145

Catalyst 145 is designed for a lower mixed viscosity and long pot life. Has outstanding low temperature properties and good adhesion to glass.

1. By weight, thoroughly mix 18 parts Catalyst 145 to 100 parts 20-3651\40 Resin
By volume, thoroughly mix 27 part Catalyst 145 to 100 part 20-3651\40 Resin.
2. Pour and allow to cure according to one of the following schedules:

25°C 24 Hours
45°C 3-6 Hours
65°C 3-4 Hours



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.

06/02