

## 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.

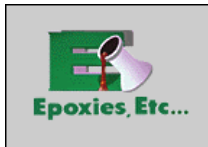
### TYPICAL SPECIFICATIONS:

		<u>CAT.190</u>	<u>CAT.105</u>	<u>CAT.145</u>
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 <sup>15</sup>	>10 <sup>14</sup>	>10 <sup>14</sup>
Dissipation Factor, 1MHZ		.06	.02	.07
Water Absorption, %(24Hr.)		0.3	0.1	0.3
Thermal Conductivity, BTU/hr/ft <sup>2</sup> /°F/in.		4.6	4.6	4.6
Thermal Expansion Coefficient, 1°C		48x10 <sup>-6</sup>	45x10 <sup>-6</sup>	60.5x10 <sup>-6</sup>
Flexural Strength, psi		12,000	14,000	10,000
Outgassing				
% TML		0.31	0.55	---
% CVCM		0.03	0.01	---

**1-800-EPOXIES (376-9437) • 401-946-5564 • Fax: 401-946-5526**

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## Epoxy, Urethane & Silicone Formulations

### 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 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

#### B. 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.

#### C. 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:

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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.

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