

# 20-3035

## LOW DENSITY EPOXY POTTING COMPOUND

### DESCRIPTION:

20-3035 is a low density, two component epoxy potting and encapsulating system. The 20-3035 is less than half the weight of most commercially available potting compounds.

20-3035 exhibits very low shrinkage during the cure cycle and also has a low coefficient of thermal expansion. This unique epoxy system is an ideal material for the potting of electronic assemblies where a low dielectric constant and low weight are required.

This epoxy syntactic foam system utilizes an advanced micro balloon technology filler. The 20-3035 provides high strength and stiffness, thermal and environmental stability, creep resistance, and water resistance.

20-3035FR is a flame retardant version of 20-3035.

### FEATURES:

- \* Low Dielectric Constant
- \* Low Coefficient of Thermal Expansion
- \* Low Shrinkage
- \* Low Density
- \* Excellent Moisture Resistance

### TYPICAL SPECIFICATIONS:

	<b>Cat.190</b>	<b>Cat.105</b>	<b>Cat.140</b>
Viscosity resin, 25°C, cps	45,000	-----	-----
Mixed viscosity, 25°C, cps	25,000	35,000	5,000
Specific gravity, @ 25°C	.82	.83	.84
Pot life, 100 gram mass, @ 25°C	45 Min.	> 4 Hrs.	30 Min.
Hardness, Shore D	80D	82D	78D
Flexural strength, psi	7,000	6,800	5,000
Compressive strength, psi	12,000	12,000	10,000
Tensile strength, psi	3,000	4,800	4,300
Linear shrinkage, in/in	.001	.002	.001
Water absorption, % (24 hr.)	.13	.05	.40
Coefficient of thermal expansion, °C	43x10 <sup>-6</sup>	40x10 <sup>-6</sup>	43x10 <sup>-6</sup>
Thermal conductivity, btu/hr/ft <sup>2</sup> /°F/in	1.3	1.3	1.3
Operating temperature, °C	-40 to +130	-55 to +155	-65 to +105
Outgassing			
% TMLV	.46	.49	.74
%CVCM	.06	.06	.09
Dielectric strength, volts/mil	375	375	375
Dielectric constant, 1 MHz	2.70	2.73	2.9



Dissipation factor, 1 MHz	.05	.05	.05
Volume resistivity, ohm-cm @ 25°C	>10 <sup>13</sup>	>10 <sup>13</sup>	>10 <sup>13</sup>
Mix ratio by weight	100:11	100:14	100:23

**MIXING INSTRUCTIONS:**

Since some separation of fillers is common during shipping and storage we recommend that 20-3035 be mixed prior to use.

**ROOM TEMPERATURE CURING CATALYST 190:**

- 1) By weight thoroughly mix 11 parts Catalyst 190 to 100 parts 20-3035 Resin.
- 2) Slight warming (40°C) of the resin prior to mixing will improve pourability and air release.
- 3) Pour and cure according to one of the following cure schedules:

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

**ROOM TEMPERATURE CURING CATALYST 140:**

- 1) By weight thoroughly mix 23 parts Catalyst 140 to 100 parts 20-3035 Resin.
- 2) Slight warming (40°C) of the resin prior to mixing will improve pourability and air release.
- 3) Pour and cure according to one of the following cure schedules:

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

**HEAT CURING CATALYST 105:**

- 1) By weight thoroughly mix 14 parts Catalyst 105 to 100 parts 20-3035 Resin.
- 2) Slight warming (40°C) of the resin prior to mixing will improve pourability and air release.
- 3) Pour and cure according to one of the following cure schedules:

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

**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.