

## **ERP-516** **MACHINABLE EPOXY CASTING AND POTTING COMPOUND**

**ERP-516** is a filled epoxy resin system that combines good handling characteristics with excellent cured properties. Its low viscosity allows good flowability and air release. The cured epoxy is readily machinable with standard cutting tools. **ERP-516** is useful for general purpose casting, potting or encapsulating intricate circuits, operational amplifiers, transformers and other electrical components.

### **TYPICAL HANDLING PROPERTIES:**

Resin	ERP-516A
Hardener	ERP-516B
Mix ratio by weight, phr	6
Mixed viscosity at 25°C, cp	6000
Pot life at 25°C (100 grams, hrs)	1/2
<b>Recommended Cure Schedule</b>	<b>2 hrs at 80°C</b>
<b>Alternated Cure Schedule</b>	<b>24 hrs at 25°C</b>

### **TYPICAL CURED PROPERTIES AFTER RECOMMENDED CURE:**

Color	Black
Specific Gravity	1.55
Hardness, Shore D	86
Linear Shrinkage (%)	0.01
Water Absorption (24 hr immersion at 25°C), (%)	0.02
Thermal Conductivity, Btu.in/hr.°F.Ft <sup>2</sup>	4.2
Service Temperature range	-55°C to 120°C
Glass Transition Temperature, °C	110
Coefficient of Linear Thermal Expansion, 10 <sup>-6</sup> /°C	
from -55°C to 25°C	34
from 25°C to 100°C	39
Flexural Strength at 25°C, psi	15,500
Flexural Modulus at 25°C, psi	4.0x10 <sup>6</sup>
Dielectric Strength, volts/mil (3 mm thick sample)	470
Dielectric Constant at 1 kHz and 25°C	4.5
Dissipation Factor at 1 kHz and 25°C	0.01
Volume Resistivity at 25°C, ohm-cm	4.0x10 <sup>15</sup>

### **INSTRUCTIONS FOR USE:**

The individual components containing fillers should be mixed or agitated without introducing excessive air before use to ensure that all fillers are properly dispersed. To obtain the best cured properties, accurate proportioning and thorough mixing are essential.

Mix the contents thoroughly each time before removing material. To each 100 grams of ERP-516A, add 6 grams of ERP-516B and mix it well preferably using a mechanical mixer. Vacuum degas for five minutes to remove dissolved and entrapped air. Proceed with the casting or potting application and cure as recommended.

### **FOR INDUSTRIAL USE ONLY:**

These materials are intended for industrial use only, and the practices of good housekeeping, safety and cleanliness should be followed before, during and after use.

### **WARNING!!**

Although the system contains low volatility materials, care should be taken in handling. Adequate ventilation of the work place and ovens is essential. These materials may cause injury to the skin following prolonged or repeated contact and dermatitis in susceptible individuals. In case of skin contact, wash thoroughly with soap and water. For eyes, flush immediately with plenty of water for at least 10 minutes and seek medical attention. Refer to the Material Safety Data Sheet for additional health and safety information.

### **SHELF LIFE:**

The shelf life of these materials is greater than two years when stored in unopened containers at an average temperature of 25°C.