

ERP-502
HIGH PERFORMANCE EPOXY POTTING COMPOUND

ERP-502 is a filled epoxy system with good impact resistance that can be cured at room temperature or at a moderately elevated temperature. The material's low shrinkage and good thermal shock properties minimize the stress on potted components. It adheres well to insulated wires and is recommended for potting devices such as connector shells from which rigid or flexible wires may protrude directly through the epoxy.

TYPICAL HANDLING PROPERTIES:

Resin	ERP-502A
Hardener	ERP-502B
Mix ratio by weight, phr	15
Mixed viscosity at 25°C, cp	10,000
Pot life (100 grams) at 25°C, hrs	2
Recommended Cure Schedule	2 hrs at 70°C
Alternated Cure Schedule	48 hrs at 25°C

TYPICAL CURED PROPERTIES AFTER RECOMMENDED CURE:

Color	Black
Specific Gravity	1.55
Hardness, Shore D	90
Linear Shrinkage (%)	0.3
Water Absorption (24 hr immersion at 25°C), (%)	0.31
Lap Shear Strength to Aluminum, psi	
at -40°C	2500
at 25°C	3300
Service Temperature range	-40°C to 105°C
Glass Transition Temperature, °C	52
Coefficient of Linear Thermal Expansion, 10 ⁻⁶ /°C	
from -55°C to 25°C	48
Flexural Strength at 25°C, psi	17,000
Flexural Modulus at 25°C, psi	0.94x10 ⁶
Dielectric Strength, volts/mil (3 mm thick sample)	450
Dielectric Constant at 1 kHz and 25°C	5.0
Dissipation Factor at 1 kHz and 25°C	0.007
Volume Resistivity at 25°C, ohm-cm	1.0x10 ¹⁵

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-502A, add 15 grams of ERP-502B 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.