EASTERN RESINS CORP.
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TECHNICAL BULLETIN

ERA-104
LOW VISCOSITY EPOXY ADHESIVE

ERA-104 is an undiluted, unfilled, low viscosity, clear epoxy adhesive. It exhibits resilient bonds when joining dissimilar materials. It can be cured at room temperature or for rapid cures at elevated temperatures. The cured epoxy is rigid, has excellent impact resistance as well as very good chemical and water resistance. It is recommended for joining transparent materials such as glass and where a thin glue line is desired. This adhesive will also bond most metals, ceramics and some plastics such as polystyrene, polysulfone, polycarbonate, rigid PVC, etc.

TYPICAL HANDLING PROPERTIES:

Resin	ERA-104A
Hardener	ERA-104B
Mix ratio by weight, phr	13
Mixed Viscosity at 25°C, cp	2250
Pot Life at 25°C (100 grams), mins	30
Recommended Cure Schedule	**Gel at 25°C + 2 hrs at 100°C**
Alternate Cure Schedule	**24 to 48 hrs at 25°C**

TYPICAL CURED PROPERTIES AFTER RECOMMENDED CURE:

Color	Clear
Specific Gravity	1.17
Hardness, Shore D	90
Water Absorption (7 day immersion) at 25°C, %	0.41
Lap Shear Strength to Aluminum at 25°C, psi	2000
Flexural Strength at 25°C, psi	13,900
Flexural Modulus (yield) at 25°C, psi	4.4×10^5
Service Temperature range	-55°C to 120°C
Glass Transition Temperature, °C	120
Coefficient of Linear Thermal Expansion, 10^{-6}/°C from –60°C to 25°C	52
Dielectric Constant at 1 kHz and 25°C	3.9
Dissipation Factor at 1 kHz and 25°C	0.02
Volume Resistivity at 25°C, ohm-cm	6×10^{15}

INSTRUCTIONS FOR USE:

At room temperature, mix 100 grams of ERA-104A with 13 grams of ERA-104B and vacuum degas. Apply to clean bonding surfaces and cure as recommended to achieve the desired properties. Typical cured properties were determined using the recommended cure schedule. Some difference in properties may occur with the alternate or other cure schedules.

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^{o}C.