

ERA-162
LOW EXPANSION EPOXY ADHESIVE

ERA-162 is a highly filled epoxy adhesive with a low coefficient of thermal expansion, good dimensional stability and excellent chemical resistance. It has a paste consistency and is useful in applications requiring bonding or hermetic sealing of metal, ceramic, glass, and other difficult to bond substrates.

TYPICAL HANDLING PROPERTIES:

Resin	ERA-162A
Hardener	ERA-162B
Mix ratio by weight, phr	4
Pot Life (100 grams) at 25°C, minutes	60
Recommended Cure Schedule	2 hrs at 100°C
Alternate Cure Schedule	48 hrs at 25°C

TYPICAL CURED PROPERTIES AFTER RECOMMENDED CURE:

Color	Beige
Specific Gravity	1.8
Hardness, Shore D	92
Water Absorption after 24 hrs immersion at 25°C, %	0.04
Lap Shear Strength to Aluminum, psi	
at -55°C	2500
at 25°C	2500
at 93°C	2300
Thermal Conductivity at 40°C, Btu.in/hr.ft ² .°F	4.2
Flexural Strength at 25°C, psi	8500
Flexural Modulus at 25°C, psi	1.5x10 ⁶
Service Temperature range	-55°C to 120°C
Glass Transition Temperature, °C	80
Coefficient of Linear Thermal Expansion, 10 ⁻⁶ /°C	
from -55°C to 25°C	27
from 25°C to 71°C	40
Dielectric Strength, Volts/mil	450
Dielectric Constant at 1 kHz and 25°C	5.6
Dissipation Factor at 1 kHz and 25°C	0.004
Volume Resistivity at 25°C, ohm-cm	5x10 ¹⁵

INSTRUCTIONS FOR USE:

Mix ERA-162A thoroughly before each use. If the contents are hard or lumpy, warm to 80°C before mixing.

At room temperature, mix 100 grams of ERA-162A with 4 grams of ERA-162B. Mix thoroughly until uniform in consistency and vacuum degas. 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°C.