



ISO 9001-2008 Certified

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TECHNICAL BULLETIN

EB-109M-4 FLEXIBLE, LOW STRESS, LOW VISCOSITY EPOXY ADHESIVE

EB-109M-4 is an unfilled, flexible, low stress, low viscosity clear epoxy system designed for the encapsulation of a wide range of stress sensitive electronic components. The cured system provides excellent performance at wide temperature range and protection from mechanical shock and vibration.

TYPICAL HANDLING PROPERTIES:

Adhesive	EB-109M-4
Hardener	EH-21FL
Mix ratio by weight, (Adhesive/Hardener)	100/28
Mixed Viscosity at 25°C, cp	300-600
Pot Life at 25°C (100 grams), minutes	60
Shelf life:	
Two Parts Kit @ 25°C	1-year
Frozen @ -40°C	1-year
Recommended Cure	3 hrs at 65°C
Alternate Cure	24-48 hrs at 25°C

TYPICAL CURED PROPERTIES:

(Tested @ 25°C unless otherwise indicated)

Color	Clear
Specific Gravity	1.16
Hardness, Shore D	50
Water Absorption (24 hr @ RT), %	<1
Lap Shear Strength to Aluminum, psi	2200
Service Temperature range, °C	-55 to 90
Glass Transition Temperature, °C	45
Coefficient of Linear Thermal Expansion, 10 ⁻⁶ /°C	
Below Tg	80
Above Tg	200
Dielectric Strength, Volts/mil	420
Dielectric Constant at 1 kHz	3.8
Dissipation Factor at 1 kHz	0.012
Volume Resistivity (ohm-cm)	8x10 ¹⁴

INSTRUCTIONS FOR USE:

1. Weigh each 100 grams of EB-109M-4 to 28 grams of Hardener EH-21FL.
2. Mix until uniform. Scrape the sides and bottom of container repeatedly during mixing.
3. Apply to clean bonding surfaces and cure as recommended to achieve the desired properties. Typical cured properties were determined using recommended cure schedule. Some difference in properties may occur with the alternate or other cure schedules.

FROZEN ADHESIVE:

Thaw premixed frozen adhesive at room temperature for 5-10 minutes. Dispense adhesive and cure at recommended schedules.

AVAILABILITY:

2 parts Kit - Packaged in Pint, Quart, Gallon, and 5-Gallon size.

Premixed and frozen - Packaged in 3cc, 5cc, 10cc and 30cc disposable syringes and ship in dry ice at -80°C.

FOR INDUSTRIAL USE ONLY:

Practices of good housekeeping, safety and cleanliness should be followed before, during and after use.

WARNING!

Adequate ventilation of 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 Material Safety Data Sheet (**MSDS**) for additional health and safety information.

DISCLAIMER: All data given here is offered as a guide to the use of these materials and not as a guarantee of their performance. The user should evaluate their suitability for own purposes. Properties are typical and should not be used in preparing specifications. Statements are not to be construed as recommendations to infringe any patent.