



TECHNICAL BULLETIN

EPOXIBOND™ EB-403-1LV THERMALLY CONDUCTIVE COMPONENT EPOXY ADHESIVE

EB-403-1LV is a single component, thermally conductive, electrically insulating, epoxy adhesive and encapsulant for semiconductor, hybrid IC, and electronic circuit assembly applications.

A flowable paste, it is also useful for deposition methods like dispensing, printing, or handheld processes.

Suggested Applications:

Hybrid:

- Staking SMDs onto the PCB for extra mechanical support; insulation layer between 2 contact pads of caps and resistors.
- Heat sinking devices on ceramic PCB and PCB to external case; adhesion to Si, Au, kovar, Al-N, BT
- Reinforcing and extra mechanical support for wire bond integrity.

Electronics:

- Bonding passive devices such as inductor coils, ferrites, motors, connectors, and various SMDs
- Adhesion to FR4 and common PCB substrates and housings

TYPICAL HANDLING PROPERTIES:

Epoxybond	403-1LV
Viscosity, cPs	150,000-250,000
Pot life at 80°C, minutes	30

Recommended Cure	1 hr/100°C+1 hr/150°C
Alternate Cure	30 min/150°C

TYPICAL CURED PROPERTIES:

(Tested @ 25°C unless otherwise indicated)

Color	Black
Specific Gravity	2.1
Hardness, Shore D	90
Lap shear strength to aluminum, psi	
At 25°C	2200
At 100°C	1850
Water Absorption (24 hr at RT), %	0.1
Thermal Conductivity, W/m ² K	1.4
Service Temperature range, °C	-55 to 230
Glass Transition Temperature, °C	132
Coefficient of Thermal Expansion, 10 ⁻⁶ /°C	
Below Tg	28
Above Tg	>140
Dielectric Strength, Volts/mil	460
Dielectric Constant at 1 kHz	5.3
Dissipation Factor at 1 kHz	0.04
Volume Resistivity, ohm-cm	6x10 ¹⁵

INSTRUCTIONS FOR USE:

1. Use dispensing equipment for best results.
2. For small applications, apply the product using a syringe or clean spatula.
3. Avoid air entrapment to obtain optimum cured properties.
4. Proceed with the bonding application and cure as recommended.
5. Typical cured properties were determined using recommended cure schedule. Some difference in properties may occur with the alternate or other cure schedules.

AVAILABILITY:

Packaged in Pint and Quart size
 30cc syringe & 10 OZ Cartridge

SHELF LIFE (STORAGE TEMPERATURE):

Average 25°C	3 months
below 10°C	6 months

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. 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 the material 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.