



ISO-9001-2015 Certified

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# TECHNICAL BULLETIN

## EPOXIBOND™ EB-403-1LV-T1 ONE PART THERMALLY CONDUCTIVE ADHESIVE

**EB-403-1LV-T1** is a single component, thermally conductive, electrically insulating, epoxy adhesive for semiconductor, hybrid IC, and electronic circuit assembly applications. It is a thixotropic paste and a non-sagging adhesive and easy to dispense. 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:

Appearance	No-Sag Paste
Viscosity, 25°C, cPs	800,000-1,200,000
Pot life at 80°C, minutes	30
<b>Recommended Cure</b>	<b>1 hr/100°C+1 hr/150°C</b>
<b>Alternate Cure</b>	<b>30 min/150°C</b>

### TYPICAL CURED PROPERTIES:

(Tested @ 25°C unless otherwise indicated)

Color	Black
Specific Gravity	2.2
Hardness, Shore D	90
Lap shear strength to aluminum, psi	
At 25°C	2700
At 100°C	2000
Water Absorption (24 hr at RT), %	0.1
Thermal Conductivity, W/m <sup>2</sup> K	1.8
Service Temperature, °C	-55 to 260
Glass Transition Temperature, °C	145
Coefficient of Thermal Expansion, 10 <sup>-6</sup> /°C	
From -55°C to 25°C	27.5
From 25°C to 100°C	37.8
Dielectric Strength, Volts/mil	460
Dielectric Constant at 1 kHz	5.3
Dissipation Factor at 1 kHz	0.04
Volume Resistivity, ohm-cm	6x10 <sup>15</sup>

### 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 workplace 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.