



ISO-9001-2008 Certified

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TECHNICAL BULLETIN

EPOXIBOND-430-1 THERMALLY CONDUCTIVE ADHESIVE

EB-430-1 is a highly versatile epoxy adhesive formulated for semiconductor industry. An easy to-spread thixotropic paste, it offers high heat transfer, low shrinkage and a coefficient of thermal expansion comparable to that of copper and aluminum. **This adhesive is designed for protecting IC's in TAB, as well as glob-top encapsulant for COB placement.** Other applications include fabricating heat sinks, bonding semiconductors and transistors to heat sinks and general purpose bonding of electronic components.

TYPICAL HANDLING PROPERTIES:

Adhesive	PART A
Hardener	PART B
Mix ratio by weight, (Adhesive/Hardener)	100/4
Mixed viscosity at 25°C, cps	60000-80000
Pot life at 25°C (100 gram), days	1

Recommended Cure	4 hrs @ 100°C
Alternate Cure	10 min @ 150°C

TYPICAL CURED PROPERTIES:

(Tested @ 25°C unless otherwise indicated)

Color	White
Specific Gravity	1.45
Hardness, Shore D	84
Lap shear strength to aluminum, psi	
At 25°C	2000
Water Absorption (24 hr at RT), %	0.01
Thermal Conductivity, W/mK	1.0
Glass Transition Temperature, °C	122
Service Temperature, °C	-55 to 200
Coefficient of Thermal Expansion, 10 ⁻⁶ /°C	
Below Tg	29
Flexural Strength, psi	12,800
Flexural Modulus, psi	8x10 ⁵
Dielectric Strength, Volts/mil	450
Dielectric Constant at 1 kHz	4.1
Dissipation Factor at 1 kHz	0.01
Volume Resistivity, ohm-cm	1x10 ¹⁵

INSTRUCTIONS FOR USE:

1. Weigh each 100 grams of PART A to 4 grams of PART B.
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.
4. 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, and 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.