



TECHNICAL BULLETIN

EB-406

FAST CURE, THERMALLY CONDUCTIVE EPOXY ADHESIVE

EB-406 is two part, fast cure, and thermally conductive epoxy adhesive. Both components are filled permitting a simple 1:1 mix ratio by weight or volume. It has smooth creamy consistency. It begins to gel within 20 minutes and can cure in 4 to 8 hours at room temperature.

This adhesive is principally used to form thermally conductive joints in fabricated heat sinks and between heat sinks and power devices. Typical applications include fabricating heat sinks, bonding semiconductors and transistors to heat sinks and general purpose bonding of electronic components.

Key Feature and Benefits:

- Fast room temperature cure
- Forms strong bonds to a variety of substrates
- Thixotropic paste – no sag during cure
- High Thermal Conductivity – very good heat dissipation from bonded parts

TYPICAL HANDLING PROPERTIES:

Consistency	
Resin	Smooth paste
Hardener	Smooth paste
Viscosity, 25°C cps	80,000-120,000
Mix ratio by weight/ Volume (A: B)	1:1
Working Time (20 grams)	20 minutes
Fixture Time	1-2 hrs
Shelf life @ 25°C	1 year
Recommended Cure	8-12 hrs @ 25°C
Alternate Cure	<10 minutes @ 65°C

TYPICAL CURED PROPERTIES:

Color	Grey
Specific Gravity	2.1
Hardness, Shore D	88
Thermal Conductivity, W/m ² K	1.7
Lap Shear Strength to Aluminum, psi	2000
Glass Transition Temperature (Tg), °C	54
Coefficient of Thermal Expansion, ppm/°C	
Below Tg	72
Above Tg	200
Volume Resistivity, ohm-cm	>10 ¹⁴

INSTRUCTIONS FOR USE:

1. Mix each component thoroughly before use.
2. Weigh each 10 grams of PART-A to 10 grams of Hardener PART-B.
3. Mix until uniform. Scrape the sides and bottom of container repeatedly during mixing.
4. Apply to clean bonding surfaces and cure as recommended to achieve the desired properties.
5. Typical cured properties were determined using recommended cure schedule.
6. Some difference in properties may occur with the alternate or other cure schedules.

AVAILABILITY:

2 parts Kit - Packaged in Pint, Quart, and gallon kits.
 Dual Cartridge: 50cc with static mixer.

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.