

TIM-816

Two Parts, High Strength Thermally Conductive Epoxy Adhesive

TIM-816 is a high strength, thermally conductive, structural epoxy adhesive. This tough adhesive has an excellent combination of shear and peel strength. It has also excellent impact and vibration resistance and low temperature flexibility. This high performance epoxy adhesive exhibits very good physical, thermal, and electrical insulation properties. It is recommended for bonding aluminum, steel, copper, brass, wood, porcelain, and engineering thermoplastics.

TYPICAL HANDLING PROPERTIES:

Adhesive	PART-A
Hardener	PART-B
Mix ratio by weight, (Adhesive/Hardener)	100/100
Viscosity of mixed adhesive, cp	Paste
Pot Life at 25°C (100 grams), minutes	90-120

Recommended Cure **24 hr/25°C + 2 hr/100°C**
Alternate Cure **48 hr/25°C**

TYPICAL CURED PROPERTIES AFTER RECOMMENDED CURE:

(Tested @ 25°C unless otherwise indicated)

Color	Black
Specific Gravity	1.7
Hardness, Shore D	86
Lap Shear Strength to Aluminum, psi	2800
Service Temperature range, °C	-55 to 110
Thermal Conductivity, Btu.in/hr.°F.Ft ²	5.9
Glass Transition Temperature, °C	80
Coefficient of Linear Thermal Expansion, 10 ⁻⁶ /°C	
From -55°C to 25°C	60
From 25°C to 90°C	95
Dielectric Strength, Volts/mil	420
Dielectric Constant, 1 kHz	5.3
Dissipation Factor, 1 kHz	0.08
Volume Resistivity, ohm-cm	3x10 ¹⁴

INSTRUCTIONS FOR USE:

1. Weigh each 100 grams of PART-A to 100 grams of Hardener 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 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.