

TIM-816TC

Thermally Conductive High Strength Epoxy Adhesive

DESCRIPTIONS

TIM-816TC is a two component, thermally conductive, electrically insulating epoxy designed for heat sinking electronics and semiconductors. It may be used as an adhesive, potting, or encapsulation material, for industries such as consumer, medical or optics.

Applications: 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 passes 500 thermal cycles from -50°C to 200°C. Semiconductor: capillary flow underfill for flip chip mounted die and glob top fill encapsulant. Electronics: heat sinking; thermally conductive potting and general protection of PCB and SMDs; potting and protection of resistor coils or Peltier devices

INSTRUCTION FOR USE

1. Weigh each 100 grams of Resin (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.

Note: Refer to Safety Data Sheet (**SDS**) for additional health and safety information.

AVAILABILITY

2 Parts Kits: 50cc, 400cc, 2 gal & 10 gal.

Typical Property	Test Method	Value
Type		Two Parts/RT cure
Special Future		Excellent shear and peel strength High Temperature Stable
Color	Visual	Black
Mix Ratio by by weight		100:100
Viscosity (Mixed) Pa.S	Brookfield	>250
Specific Gravity	ASTM D792	2.1
Pot Life @ 25°C. (100 grams) Minutes		40-60
Cure Schedule		24 hrs@25°C or 120 minutes@80°C
Operating Temperature Range.°C		-55°C to 200°C
Shelf Life, 25C		12 months
Cured Properties (after recommended cure)		
Hardness, Shore D	ASTM D2240	81
Glass Transition Temperature.°C	DSC	90°C
Lap Shear Strength to Aluminum. PSI	ASTM D1002	> 3000
T-peel strength to aluminum. pli		1.8
Coefficient Of Thermal Expansion (CTE), 10 ⁻⁶ /°C.	ASTM E831	Below Tg 77, Above Tg >140
Thermal Conductivity (W/m-K)	ASTM D5470	1.8
Breakdown Voltage (KV/mm)	ASTM D149	17
Dissipation Factor (1KHz)	ASTM D150	0.4
Volume Resistivity (Ohm-cm)	ASTM D257	10 ^{^14}

DISCLAIMER: All statements, technical information, and recommendations related to Timtronics products are based on information believed to be reliable, but accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You must assume all risks and liability associated with such use. Timtronics will not be liable for any indirect, special, incidental or consequential loss or damage arising from this product, regardless of legal theory asserted.