

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	1:1	180°C	1 Hour
Specific Gravity:		150°C	90 Minutes
Part A	1.36		
Part B	1.92		
Pot Life:	2 Days		
Shelf Life:	One year at room temperature		

Note: Container(s) should be kept closed when not in use. For filled systems, mix contents of each container (A & B) thoroughly before mixing the two together. \*Please see Applications Note available on our website.

### Product Description:

EPO-TEK<sup>®</sup> H70E-175 is a two component, thermally conductive, electrically insulating epoxy adhesive for semiconductor, microelectronic and opto-electronic packaging. It may be used in aluminum heat sinking power devices in the form of hybrid circuits or at the SMD/PCB level.

### EPO-TEK<sup>®</sup> H70E-175 Advantages & Application Notes:

- Semiconductor: die attaching chips to lead-frames or ceramic microcircuit substrates
- Hybrid packaging: dielectric and thermal adhesive for microwave and military circuits; reinforcing capacitor and resistor SMD attach
- PCB: bonding aluminum heat sinks; die-attaching IC's via COB format
- Optical: heat sinking laser diodes and fiber optic components; adhesive for the optical bench

**Typical Properties:** (To be used as a guide only, not as a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results; Cure condition: 180°C/1 hour; \* denotes test on lot acceptance basis)

Physical Properties:	
*Color: Part A: Dark Grey Part B: Dark Grey	Die Shear Strength @ 23°C: ≥ 4 Kg / 1,360 psi
*Consistency: Smooth paste	Degradation Temp. (TGA): 392°C
*Viscosity (@ 20 RPM/23°C): 5,000 – 11,000 cPs	Weight Loss:
Thixotropic Index: 2.55	@ 200°C: 0.59 %
*Glass Transition Temp.(Tg): ≥ 70°C (Dynamic Cure	@ 250°C: 1.38 %
20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	@ 300°C: 3.28 %
Coefficient of Thermal Expansion (CTE):	Operating Temp:
Below Tg: 26 x 10 <sup>-6</sup> in/in/°C	Continuous: - 55°C to 200°C
Above Tg: 84 x 10 <sup>-6</sup> in/in/°C	Intermittent: - 55°C to 300°C
Shore D Hardness: 88	Storage Modulus @ 23°C: 756,581psi
Lap Shear Strength @ 23°C: > 2,000psi	*Particle Size: ≤ 20 Microns
Thermal Properties:	
Thermal Conductivity: 0.32 W/mK	
Electrical Properties:	
Dielectric Constant (1KHz): 4.72	Volume Resistivity @ 23°C: 2 x 10 <sup>13</sup> Ohm-cm
Dissipation Factor (1KHz):	

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