

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	100:15	150°C	1 Hour
Specific Gravity:			
Part A	2.70	<u>2-Step Cure</u>	
Part B	1.22	100°C	1 Hour
Pot Life:	6 Hours	120°C	2 Hours (post-cure)
Shelf Life:	One year at room temperature		

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

### Product Description:

EPO-TEK<sup>®</sup> H77 is a two component, thermally conductive, electrically insulating epoxy system designed for lid-sealing of hybrids found in hermetic packaging of micro-electronics. Lids can be ceramic, glass, aluminum or kovar. Package types can be plastic, metal cases or ceramic.

### EPO-TEK<sup>®</sup> H77 Advantages & Application Notes:

- High temperature epoxy. Coatings on metals have been subjected to temperatures as high as 260°C without bond failure; can also resist >300°C processes found in ceramic or hermetic packaging.
- Rheology provides a soft, smooth, flowing paste with excellent handling characteristics; low viscosity allows it to be poured or cast into shape for potting applications; compatible with automated dispense equipment, screen printing, or stamping techniques.
- Available in smaller particle size, if needed. Also available in higher viscosity for better non-flow properties. Contact [techserv@epotek.com](mailto:techserv@epotek.com) for your best match.
- Excellent solvent and chemical resistance - ideal for harsh environments found in aircraft, under-hood automotive, medical, and petrochemical refineries such as down-hole applications.
- Can provide near hermetic seals in the packaging of MEMs devices, like pressure sensors or accelerometers, packaged in TO-cans.
- Passes NASA low outgassing standard ASTM E595 with proper cure - <http://outgassing.nasa.gov/>
- Suggested for ultra-high vacuum applications.
- It can also be used for sealing of optical filter windows found in scientific OEM or sensor devices.

**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: 150°C/1 hour; \* denotes test on lot acceptance basis)

Physical Properties:	
*Color: Part A: Grey Part B: Amber	Die Shear Strength @ 23°C: ≥ 5 Kg / 1,700 psi
*Consistency: Smooth pourable paste	Degradation Temp. (TGA): 405°C
*Viscosity (@ 20 RPM/23°C): 6,000 – 12,000 cPs	Weight Loss:
Thixotropic Index: 1.4	@ 200°C: 0.15%
*Glass Transition Temp.(Tg): ≥ 80°C (Dynamic Cure	@ 250°C: 0.38%
20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	@ 300°C: 1.47%
Coefficient of Thermal Expansion (CTE):	Operating Temp:
Below Tg: 33 x 10 <sup>-6</sup> in/in/°C	Continuous: - 55°C to 250°C
Above Tg: 130 x 10 <sup>-6</sup> in/in/°C	Intermittent: - 55°C to 350°C
Shore D Hardness: 90	Storage Modulus @ 23°C: 950,693 psi
Lap Shear Strength @ 23°C: 1,523 psi	*Particle Size: ≤ 50 Microns
Thermal Properties:	
Thermal Conductivity: 0.66 W/mK	
Electrical Properties:	
Dielectric Constant (1 KHz): 5.64	Volume Resistivity @ 23°C: ≥ 1 x 10 <sup>13</sup>
Dissipation Factor (1 KHz): 0.006	

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