

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	10:2	65°C	2 Hours
Specific Gravity:		23°C	24 Hours
Part A	1.10		
Part B	0.87		
Pot Life:	1 Hour		
Shelf Life:	1 year at room temperature		

*Note: Container(s) should be kept closed when not in use. *Please see Applications Note available on our website.
- TOTAL MASS SHOULD NOT EXCEED 25 GRAMS -*

Product Description:

EPO-TEK[®] 320 is a two component, black-colored and optically opaque epoxy designed for optical, medical, and opto-electronic packaging of semiconductor devices and components. It is a widely used fiber-optic grade epoxy.

EPO-TEK[®] 320 Advantages & Application Notes:

- Optically opaque between IR and VISIBLE regions of light, including 185 – 2500 nm range
- It can be used for room temperature curing, low temp, or box oven elevated temperature cure.
- Many modifications are available, such as viscosity, electrical insulation, Tg, and flexibility. Contact techserv@epotek.com for your best recommendation.
- Suggested applications
 - Optical:
 - blocking light in photonics packaging through VIS and NIR range; sensor packaging including IR detectors packaged in TO-cans
 - bonding of various optics including lens, prism, diodes
 - adhesion to metals, most plastics, and glasses.
 - Fiber Optic: sealing / potting fibers into the boot, ferrule, or fiber feed-through of the package wall
 - Medical: bonding/ potting/ sealing of optics used for imaging related electronics; complies with USP Class VI biocompatibility standards
- The low viscosity nature allows syringe dispensing and automation, hand, brushing, roller coating, tooth-pick or spatula, and pour or dipping.

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: varies as required ; * denotes test on lot acceptance basis)*

Physical Properties:	
*Color: Part A: Black Part B: Clear/Colorless	Die Shear Strength @ 23°C: ≥ 15 Kg / 5,100 psi
*Consistency: Slightly thixotropic paste	Degradation Temp. (TGA): 384°C
*Viscosity (100 @ RPM/23°C): 700 – 1,200cPs	Weight Loss:
Thixotropic Index: 5.7	@ 200°C: 0.27%
*Glass Transition Temp.(Tg): ≥ 55°C (Dynamic Cure	@ 250°C: 0.45%
20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	@ 300°C: 0.80%
Coefficient of Thermal Expansion (CTE):	Operating Temp:
Below Tg: 29 x 10 ⁻⁶ in/in/°C	Continuous: - 55°C to 200°C
Above Tg: 100 x 10 ⁻⁶ in/in/°C	Intermittent: - 55°C to 300°C
Shore D Hardness: 83	Storage Modulus @ 23°C: 261,271 psi
Lap Shear Strength @ 23°C: > 2,000psi	*Particle Size: ≤ 20 Microns
Optical Properties @ 23°C:	
Index of Refraction @ 23°C: N/A	Spectral Transmission @ 23°C: < 1% @ 300 - 2500nm
Electrical & Thermal Properties:	
Thermal Conductivity: N/A	Volume Resistivity @ 23°C: ≥ 1 x 10 ⁶ Ohm-cm
Dielectric Constant (1KHz): N/A	Dissipation Factor (1KHz): N/A

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