

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	10:1	150°C	1 Minute
Specific Gravity:		120°C	5 Minutes
Part A	1.12	100°C	10 Minutes
Part B	1.02	80°C	30 Minutes
Pot Life:	3 Hours		
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® 353ND-T Black is a two component, high temperature, thixotropic epoxy for fiber optic, PCB and various medical applications.

### EPO-TEK® 353ND-T Black Advantages & Application Notes:

- This product is a color-coded, black and opaque version of the industry standard EPO-TEK® 353ND-T epoxy adhesive.
- Suggested applications:
  - Semiconductor, glob top DAM around IC's, using COB or DCA packaging formats
  - Electronics Assembly
    - Insulating adhesive for bonding stainless steel metals, ceramics and carbon composites used in ink-jetting heads
    - Insulating and plugging wires and feed-through cables of automotive circuits
    - Hard Disk Drive – thixotropic staking and termination of Al and Cu coils
    - Adhesive for brushless motors and Cu coil windings
  - Medical
    - Light blocking in endoscopes, camera optics and IR sensor devices
  - Optical
    - Fiber optic component packaging: bonding fibers, active optics, metals, ceramics and plastic
- Available in alternative viscosities and color. Contact [techserv@epotek.com](mailto:techserv@epotek.com) for your best recommendation.

**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: Black Part B: Amber	Die Shear Strength @ 23°C: ≥ 15 Kg / 5,100 psi
*Consistency: Smooth thixotropic paste	Degradation Temp. (TGA): 409°C
*Viscosity (@ 20 RPM/23°C): 9,000 – 15,000 cPs	Weight Loss:
Thixotropic Index: 3.8	@ 200°C: 0.53%
*Glass Transition Temp.(Tg): ≥ 90°C (Dynamic Cure 20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	@ 250°C: 1.22%
Coefficient of Thermal Expansion (CTE):	@ 300°C: 2.37%
Below Tg: 43 x 10 <sup>-6</sup> in/in/°C	Operating Temp:
Above Tg: 231 x 10 <sup>-6</sup> in/in/°C	Continuous: - 55°C to 225°C
Shore D Hardness: 80	Intermittent: - 55°C to 325°C
Lap Shear Strength @ 23°C: > 2,000 psi	Storage Modulus @ 23°C: 559,120 psi
	*Particle Size: ≤ 20 Microns
Optical Properties @ 23°C:	
Index of Refraction @ 23°C: N/A	Spectral Transmission @ 23°C: < 5 % @ 300-1460 nm < 7 % @ 1550 nm
Electrical & Thermal Properties:	
Thermal Conductivity: N/A	Volume Resistivity @ 23°C: ≥ 4 x 10 <sup>12</sup> Ohm-cm
Dielectric Constant (1KHz): 3.21	Dissipation Factor (1KHz): 0.003

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