

## Epoxy Technology EPO-TEK® 320 Optical, Opaque Epoxy

Category : Polymer , Thermoset , Epoxy

### Material Notes:

**Product Description:** EPO-TEK® 320 is a two component, black-colored and optically opaque epoxy designed for optical, medical, and optoelectronic packaging of semiconductor devices and components. It is a widely used fiber-optic grade epoxy. **Advantages & Application Notes:** Optically opaque between IR and VISIBLE regions of light, including 185 – 2500 nm rangelt 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. **Suggested applications**  
**Optical:** blocking light in photonics packaging through VIS and NIR range; sensor packaging including IR detectors packaged in TO-cansbonding of various optics including lens, prism, diodesadhesion 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. **Information Provided by Epoxy Technology**

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Epoxy-Technology-EPO-TEK-320-Optical-Opaque-Epoxy.php](http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-320-Optical-Opaque-Epoxy.php)

Physical Properties	Metric	English	Comments
Specific Gravity	0.870 g/cc	0.870 g/cc	Part B
	1.10 g/cc	1.10 g/cc	Part A
Viscosity	700 - 1200 cP	700 - 1200 cP	100 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	83	83	
Tensile Modulus	1.80 GPa	261 ksi	Storage
Shear Strength	>= 13.8 MPa	>= 2000 psi	Lap
	>= 35.2 MPa	>= 5100 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	29.0 µm/m-°C	16.1 µin/in-°F	Below Tg
	100 µm/m-°C	55.6 µin/in-°F	Above Tg
Maximum Service Temperature, Air	200 °C	392 °F	Continuous
	300 °C	572 °F	Intermittent
Minimum Service Temperature, Air	-55.0 °C	-67.0 °F	Continuous

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	>= 55.0 °C	>= 131 °F	Dynamic Cure 20–200°C /ISO 25 Min; Ramp 10–200°C @ 20°C/Min
Decomposition Temperature	384 °C	723 °F	Degradation Temperature

Optical Properties	Metric	English	Comments
Transmission, Visible	<= 1.0 % @Wavelength 300 - 2500 nm	<= 1.0 % @Wavelength 300 - 2500 nm	Spectral

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+6 ohm-cm	>= 1.00e+6 ohm-cm	

Processing Properties	Metric	English	Comments
Cure Time	120 min @Temperature 65.0 °C	2.00 hour @Temperature 149 °F	
	1440 min @Temperature 23.0 °C	24.0 hour @Temperature 73.4 °F	
Pot Life	60 min	60 min	
Shelf Life	12.0 Month @Temperature 25.0 °C	12.0 Month @Temperature 77.0 °F	

Descriptive Properties	Value	Comments
Color	Black	Part A
	Clear/Colorless	Part B
Consistency	Slightly thixotropic paste	
Mix Ratio By Weight	10:2	
Number of Components	Two	
Weight Loss	0.27%	200°C
	0.45%	250°C
	0.8%	300°C

## **Contact Songhan Plastic Technology Co.,Ltd.**

**Website : [www.lookpolymers.com](http://www.lookpolymers.com)**

**Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)**

**Tel : +86 021-51131842**

**Mobile : +86 13061808058**

**Skype : lookpolymers**

**Address : United North Road 215,Fengxian District, Shanghai City,China**