

## Epoxy Technology EPO-TEK® N20E Electrically Conductive Paste

Category : Polymer , Thermoset , Epoxy , Epoxy , Electrically Conductive

### Material Notes:

**Product Description:** EPO-TEK® N20E is a two component, electrically and thermally conductive, epoxy adhesive designed for semiconductor and electronics assembly. Its applications and field conditions include the optical, sensor, consumer, and industrial industries. **Advantages & Application Notes:** Pot life of more than one day allows for mass production and minimal waste. A convenient, simple 1:1 mix ratio allows for specialty packaging including double-barrel syringes, or BIPAX. **Suggested applications:** PCB / Electronics: EMI and Rf shielding of Rf and Microwave devices. Opto-electronics: IR, digital imaging, and sensor device interconnects. Versatility in cure allows for low temperature, box oven, SMT tunnel oven, hand held, or snap curing techniques to be realized. Thixotropic nature allows for deposition methods like dispensing, screen printing, stamping, or other patterning techniques. Information Provided by Epoxy Technology

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Epoxy-Technology-EPO-TEK-N20E-Electrically-Conductive-Paste.php](http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-N20E-Electrically-Conductive-Paste.php)

Physical Properties	Metric	English	Comments
Specific Gravity	2.86 g/cc	2.86 g/cc	Part B
	2.93 g/cc	2.93 g/cc	Part A
Particle Size	<= 45 µm	<= 45 µm	
Viscosity	5000 - 10000 cP	5000 - 10000 cP	20 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	50	50	
Tensile Modulus	7.874 GPa	1142 ksi	Storage
Shear Strength	>= 23.4 MPa	>= 3400 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	27.0 µm/m-°C	15.0 µin/in-°F	Below Tg
	89.0 µm/m-°C	49.4 µin/in-°F	Above Tg
Thermal Conductivity	1.19 W/m-K	8.26 BTU-in/hr-ft <sup>2</sup> -°F	
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
	-55.0 °C	-67.0 °F	Intermittent

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	260.0 °C	499.0 °F	Cure 20–200°C /ISO 25 Min; Ramp - 10–200°C @ 20°C/Min
Decomposition Temperature	478 °C	892 °F	Degradation Temperature

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 0.070 ohm-cm	<= 0.070 ohm-cm	

Chemical Properties	Metric	English	Comments
Ionic Impurities - Na (Sodium)	265 ppm	265 ppm	
Ionic Impurities - K (Potassium)	10 ppm	10 ppm	
Ionic Impurities - Cl (Chloride)	34 ppm	34 ppm	

Processing Properties	Metric	English	Comments
Cure Time	5.00 min	0.0833 hour	Minimum Bond Line
	@Temperature 150 °C	@Temperature 302 °F	
	15.0 min	0.250 hour	Minimum Bond Line
	@Temperature 120 °C	@Temperature 248 °F	
Pot Life	2160 min	2160 min	
Shelf Life	12.0 Month	12.0 Month	
	@Temperature 25.0 °C	@Temperature 77.0 °F	

Descriptive Properties	Value	Comments
Color	Dark Grey	Part A
	Dark Grey	Part B
Consistency	Smooth Paste	
Ionic Impurities NH4	16 ppm	
Mix Ratio By Weight	1:1	
Number of Components	Two	
Thixotropic Index	1.9	
Weight Loss	0.07%	200°C
	0.22%	250°C
		300°C

Descriptive Properties	0.81% Value	Comments
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