

Epoxy Technology EPO-TEK® 320-3 Optically Opaque Epoxy

Category : Polymer , Thermoset , Epoxy

Material Notes:

Material Description: 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 modification of EPO-TEK® 320 for increased electrical insulation, higher Tg, and more viscous appearance. Information Provided by Epoxy Technology

Order this product through the following link:

http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-320-3-Optically-Opaque-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.06 g/cc	1.06 g/cc	Part B
	1.52 g/cc	1.52 g/cc	Part A
Viscosity	5800 - 8200 cP	5800 - 8200 cP	50 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	88	88	
Tensile Modulus	3.63 GPa	526 ksi	Storage
Shear Strength	>= 13.8 MPa	>= 2000 psi	Lap
	>= 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
	109 µm/m-°C	60.6 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
	-55.0 °C	-67.0 °F	Intermittent
Glass Transition Temp, Tg	>= 70.0 °C	>= 158 °F	Dynamic Cure 20–200°C /ISO 25 Min; Ramp 10–200°C @ 20°C/Min
Decomposition Temperature	395 °C	743 °F	Degradation Temperature

Optical Properties	Metric	English	Comments
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Optical Properties	Metric	English	Comments
Transmission, Visible	@Wavelength 300 - 2500 nm	@Wavelength 300 - 2500 nm	Spectral

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 2.50e+11 ohm-cm	>= 2.50e+11 ohm-cm	
Dielectric Constant	5.19	5.19	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dissipation Factor	0.027	0.027	
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Processing Properties	Metric	English	Comments
Cure Time	10.0 min	0.167 hour	
	@Temperature 150 °C	@Temperature 302 °F	
Pot Life	90 min	90 min	
Shelf Life	12.0 Month	12.0 Month	
	@Temperature 25.0 °C	@Temperature 77.0 °F	

Descriptive Properties	Value	Comments
Color	Amber	Part B
	Black Opaque	Part A
Consistency	Slightly thixotropic paste	
Mix Ratio By Weight	10:1	
Number of Components	Two	
Weight Loss	0.16%	200°C
	0.36%	250°C
	0.9%	300°C

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