

Epoxy Technology EPO-TEK® 320NC-2 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. It is also more viscous and thixotropic. Can be used for adhesion, sealing, potting and encapsulation. Information Provided by Epoxy Technology

Order this product through the following link:

http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-320NC-2-Optically-Opaque-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.870 g/cc	0.870 g/cc	Part B
	2.43 g/cc	2.43 g/cc	Part A
Viscosity	1500 - 3000 cP	1500 - 3000 cP	100 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	89	89	
Tensile Modulus	4.72 GPa	685 ksi	Storage
Shear Strength	10.87 MPa	1576 psi	Lap
	>= 23.4 MPa	>= 3400 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	20.0 µm/m-°C	11.1 µin/in-°F	Below Tg
	82.0 µm/m-°C	45.6 µin/in-°F	Above Tg
Maximum Service Temperature, Air	175 °C	347 °F	Continuous
	275 °C	527 °F	Intermittent
Minimum Service Temperature, Air	-55.0 °C	-67.0 °F	Continuous
	-55.0 °C	-67.0 °F	Intermittent
Glass Transition Temp, Tg	>= 50.0 °C	>= 122 °F	Dynamic Cure 20–200°C /ISO 25 Min; Ramp 10–200°C @ 20°C/Min
Decomposition Temperature	340 °C	644 °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	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	
Dielectric Constant	9.75	9.75	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dissipation Factor	0.0030	0.0030	
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Processing Properties	Metric	English	Comments
Cure Time	60.0 min	1.00 hour	
	@Temperature 70.0 °C	@Temperature 158 °F	
	1440 min	24.0 hour	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Pot Life	30 min	30 min	
Shelf Life	12.0 Month	12.0 Month	
	@Temperature 25.0 °C	@Temperature 77.0 °F	

Descriptive Properties	Value	Comments
Color	Black	Part A
	Clear/Colorless	Part B
Consistency	Slightly thixotropic paste	
Mix Ratio By Weight	10:1	
Number of Components	Two	
Weight Loss	0.17%	200°C
	0.35%	250°C
	0.98%	300°C

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