

Epoxy Technology EPO-TEK® 320NC 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 insulation and dielectric properties. Information Provided by Epoxy Technology

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Specific Gravity	0.880 g/cc	0.880 g/cc	Part B
	2.06 g/cc	2.06 g/cc	Part A
Viscosity	1000 - 3000 cP	1000 - 3000 cP	100 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	85	85	
Tensile Modulus	3.71 GPa	538 ksi	Storage
Shear Strength	>= 13.8 MPa	>= 2000 psi	Lap
	>= 35.2 MPa	>= 5100 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	28.0 µm/m-°C	15.6 µin/in-°F	Below Tg
	94.0 µm/m-°C	52.2 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	>= 2.00e+11 ohm-cm	>= 2.00e+11 ohm-cm	
Dielectric Constant	9.92	9.92	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dissipation Factor	0.067	0.067	
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Processing Properties	Metric	English	Comments
Cure Time	60.0 min	1.00 hour	
	@Temperature 65.0 °C	@Temperature 149 °F	
	1440 min	24.0 hour	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Pot Life	20 min	20 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	Smooth pourable liquid	
Mix Ratio By Weight	10:1	
Number of Components	Two	
Weight Loss	0.39%	200°C
	0.63%	250°C
	1.31%	300°C

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