

Epoxy Technology EPO-TEK® 353ND-T Black High Temperature Thixotropic Epoxy

Category : Polymer , Thermoset , Epoxy , Epoxy, High Temperature

Material Notes:

Product Description: EPO-TEK® 353ND-T Black is a two component, high temperature, thixotropic epoxy for fiber optic, PCB and various medical applications. **Advantages & Application Notes:** This product is a color-coded, black and opaque version of the industry standard EPO-TEK® 353ND-T epoxy adhesive. **Suggested applications:** Semiconductor, glob top DAM around IC's, using COB or DCA packaging formats Electronics Assembly Insulating adhesive for bonding stainless steel metals, ceramics and carbon composites used in ink-jetting heads Insulating and plugging wires and feed-through cables of automotive circuits Hard Disk Drive – thixotropic staking and termination of Al and Cu coils Adhesive for brushless motors and Cu coil windings Medical Light blocking in endoscopes, camera optics and IR sensor devices Optical Fiber optic component packaging: bonding fibers, active optics, metals, ceramics and plastic Available in alternative viscosities and color Information Provided by Epoxy Technology

Order this product through the following link:

http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-353ND-T-Black-High-Temperature-Thixotropic-Epoxy.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.02 g/cc	1.02 g/cc	Part B
	1.12 g/cc	1.12 g/cc	Part A
Particle Size	<= 20 µm	<= 20 µm	
Viscosity	9000 - 15000 cP	9000 - 15000 cP	20 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	80	80	
Tensile Modulus	3.8550 GPa	559.12 ksi	Storage
Shear Strength	>= 13.8 MPa	>= 2000 psi	Lap
	>= 35.2 MPa	>= 5100 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	43.0 µm/m-°C	23.9 µin/in-°F	Below Tg
	231 µm/m-°C	128 µin/in-°F	Above Tg
Maximum Service Temperature, Air	225 °C	437 °F	Continuous
	325 °C	617 °F	Intermittent

Minimum Service Temperature, Air Thermal Properties	-55.0 °C Metric	-67.0 °F English	Continuous Comments
	-55.0 °C	-67.0 °F	Intermittent
Glass Transition Temp, Tg	>= 90.0 °C	>= 194 °F	Dynamic Cure 20–200°C /ISO 25 Min; Ramp 10–200°C @ 20°C/Min
Decomposition Temperature	409 °C	768 °F	Degradation Temperature

Optical Properties	Metric	English	Comments
Transmission, Visible	<= 5.0 %	<= 5.0 %	Spectral
	@Wavelength 300 - 1460 nm	@Wavelength 300 - 1460 nm	
	<= 7.0 %	<= 7.0 %	Spectral
	@Wavelength 1550 nm	@Wavelength 1550 nm	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 4.00e+12 ohm-cm	>= 4.00e+12 ohm-cm	
Dielectric Constant	3.21	3.21	
	@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	1.00 min	0.0167 hour	Minimum Bond Line
	@Temperature 150 °C	@Temperature 302 °F	
	5.00 min	0.0833 hour	Minimum Bond Line
	@Temperature 120 °C	@Temperature 248 °F	
	10.0 min	0.167 hour	Minimum Bond Line
	@Temperature 100 °C	@Temperature 212 °F	
	30.0 min	0.500 hour	Minimum Bond Line
	@Temperature 80.0 °C	@Temperature 176 °F	
Pot Life	180 min	180 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	Part A
Consistency	Smooth, thixotropic paste	
Mix Ratio By Weight	10:1	
Number of Components	Two	
Thixotropic Index	3.8	
Weight Loss	0.53%	200°C
	1.22%	250°C
	2.37%	300°C

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