

EPO-TEK® 320-3

Epoxy; Epoxide

Epoxy Technology Inc.

Message:

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.

General Information		
Uses	Electrical/Electronic Applications	
	Medical/Healthcare Applications	
	Optical Applications	
Agency Ratings	EC 1907/2006 (REACH)	
	EU 2003/11/EC	
	EU 2006/122/EC	
RoHS Compliance	RoHS Compliant	
Forms	Paste	
Physical	Nominal Value	Unit
Particle Size	< 20.0	µm
Degradation Temperature	395	°C
Die Shear Strength - > 10 kg (23°C)	23.4	MPa
Operating Temperature		
Continuous	-55 to 200	°C
Intermittent	-55 to 300	°C
Storage Modulus (23°C)	3.63	GPa
Thixotropic Index	1.80	
Weight Loss on Heating		
200°C	0.16	%
250°C	0.36	%
300°C	0.90	%
Thermal	Nominal Value	Unit
Glass Transition Temperature ¹	> 70.0	°C
CLTE - Flow		
-- ²	2.7E-5	cm/cm/°C
-- ³	1.1E-4	cm/cm/°C
Optical	Nominal Value	Unit
Transmittance (300 to 2500 nm)	< 1.0	%
Thermoset	Nominal Value	Unit
Thermoset Components		

Part A	Mix Ratio by Weight: 10	
Part B	Mix Ratio by Weight: 1.0	
Shelf Life (23°C)	52	wk
Uncured Properties	Nominal Value	Unit
Color		
-- 4	Amber	
-- 5	Black	
Density		
Part B	1.06	g/cm ³
Part A	1.52	g/cm ³
Viscosity ⁶ (23°C)	5.8 to 8.2	Pa·s
Curing Time (150°C)	0.17	hr
Pot Life	2200	min
Cured Properties	Nominal Value	Unit
Shore Hardness (Shore D)	88	
Lap Shear Strength (23°C)	> 13.8	MPa
Relative Permittivity (1 kHz)	5.19	
Volume Resistivity (23°C)	> 2.5E+11	ohms·cm
Dissipation Factor (1 kHz)	0.027	
NOTE		
1.	Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min	
2.	Below Tg	
3.	Above Tg	
4.	Part B	
5.	Part A	
6.	50 rpm	

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