

EPO-TEK® 302-3M-Black

Epoxy; Epoxide
Epoxy Technology Inc.

Message:
A two component, room temperature curing, optically opaque epoxy used for electro-optics, medical, fiber optic, circuit assembly, and semiconductor applications. The epoxy is good for adhesive joining, sealing, potting, or as a coating.

General Information		
Uses	Adhesives	
	Coating Applications	
	Electrical/Electronic Applications	
	Medical/Healthcare Applications	
	Optical Applications	
	Seals	
Agency Ratings	EC 1907/2006 (REACH)	
	EU 2003/11/EC	
	EU 2006/122/EC	
RoHS Compliance	RoHS Compliant	
Forms	Liquid	
Processing Method	Potting	
Physical	Nominal Value	Unit
Ion Type		
Cl-	42	ppm
K+	4	ppm
Na+	10	ppm
NH4+	1	ppm
Particle Size	< 20.0	µm
Degradation Temperature	351	°C
Die Shear Strength - > 10 kg (23°C)	23.4	MPa
Operating Temperature		
Continuous	-55 to 175	°C
Intermittent	-55 to 250	°C
Storage Modulus (23°C)	1.73	GPa
Weight Loss on Heating		
250°C	0.77	%
300°C	1.2	%
Thermal	Nominal Value	Unit
Glass Transition Temperature ¹	> 55.0	°C

CLTE - Flow		
-- ²	5.6E-5	cm/cm/°C
-- ³	1.9E-4	cm/cm/°C
Optical	Nominal Value	Unit
Transmittance		
900 nm	< 10.0	%
1320 nm	< 20.0	%
2500 nm	< 45.0	%
Thermoset	Nominal Value	Unit
Thermoset Components		
Part A	Mix Ratio by Weight: 100	
Part B	Mix Ratio by Weight: 45	
Shelf Life (23°C)	52	wk
Uncured Properties	Nominal Value	Unit
Color		
-- ⁴	Black	
-- ⁵	Clear/Transparent	
Density		
Part B	0.958	g/cm³
Part A	1.20	g/cm³
Viscosity ⁶ (23°C)	0.80 to 1.6	Pa · s
Curing Time (65°C)	3.0	hr
Pot Life	60	min
Cured Properties	Nominal Value	Unit
Shore Hardness (Shore D)	80	
Lap Shear Strength (23°C)	> 13.8	MPa
Relative Permittivity (1 kHz)	3.41	
Volume Resistivity (23°C)	> 5.0E+12	ohms · cm
Dissipation Factor (1 kHz)	0.011	
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 A	
5.	Part B	
6.	20 rpm	

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