

# EPO-TEK® 302-3M

Epoxy; Epoxide  
Epoxy Technology Inc.

Message:  
EPO-TEK® 302-3M is a two component epoxy used for optical, medical, fiber optic, and semiconductor applications. The epoxy is good for adhesive joining, sealing, potting, or as a coating.

General Information		
Features	Biocompatible	
	Good Adhesion	
	Good Chemical Resistance	
	Low Halogen Content	
	Low to No Outgassing	
	Low to No Water Absorption	
	Low Viscosity	
	Solvent Resistant	
Uses	Adhesives	
	Bonding	
	Coating Applications	
	Electrical/Electronic Applications	
	LEDs	
	Medical/Healthcare Applications	
	Optical Applications	
	Seals	
Agency Ratings	ASTM E 595	
	EC 1907/2006 (REACH)	
	EU 2003/11/EC	
	EU 2006/122/EC	
	USP Class VI	
RoHS Compliance	RoHS Compliant	
Forms	Liquid	
Processing Method	Encapsulating	
	Potting	
Physical	Nominal Value	Unit
Ion Type		
Cl-	42	ppm

K+	4	ppm	
Na+	10	ppm	
NH4+	1	ppm	
Degradation Temperature	351	°C	TGA
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 <sup>1</sup>	> 55.0	°C	
CLTE - Flow			
-- <sup>2</sup>	5.6E-5	cm/cm/°C	
-- <sup>3</sup>	1.9E-4	cm/cm/°C	
Optical	Nominal Value	Unit	
Refractive Index <sup>4</sup>	1.545		
Transmittance (460 to 1620 nm)	> 95.0	%	
Thermoset	Nominal Value	Unit	Test Method
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	Test Method
Color			
-- <sup>5</sup>	Clear/Transparent		
-- <sup>6</sup>	Clear/Transparent		
Density			
Part B	0.958	g/cm <sup>3</sup>	
Part A	1.20	g/cm <sup>3</sup>	
Viscosity <sup>7</sup> (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	Test Method
Shore Hardness (Shore D)	80		
Lap Shear Strength (23°C)	> 13.8	MPa	
Relative Permittivity (1 kHz)	3.39		
Volume Resistivity (23°C)	> 1.0E+13	ohms · cm	
Dissipation Factor (1 kHz)	6.1E-3		
NOTE			

1.	Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min
2.	Below Tg
3.	Above Tg
4.	589 nm
5.	Part B
6.	Part A
7.	100 rpm

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#### Recommended distributors for this material

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