

EPO-TEK® 301

Epoxy; Epoxide
Epoxy Technology Inc.

Message:
EPO-TEK® 301 is a two component, room temperature curing epoxy featuring very low viscosity, and excellent optical-mechanical properties.

General Information		
Features	Autoclave Sterilizable	
	Biocompatible	
	Ethylene Oxide Sterilizable	
	Good Adhesion	
	Low to No Outgassing	
	Low Viscosity	
	Non-Toxic	
	Radiation Sterilizable	
Uses	Adhesives	
	Electrical/Electronic Applications	
	LCD Applications	
	LEDs	
	Medical/Healthcare Applications	
	Optical Applications	
	Printed Circuit Boards	
	Seals	
Agency Ratings	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	
Thermal	Nominal Value	Unit
Glass Transition Temperature ¹	> 65.0	°C
CLTE - Flow		
-- ²	3.9E-5	cm/cm/°C
-- ³	9.8E-5	cm/cm/°C

Optical	Nominal Value	Unit	
Refractive Index ⁴	1.519		
Transmittance			
380 to 980 nm	> 99.0	%	
980 to 1640 nm	> 97.0	%	
1640 to 2040 nm	> 95.0	%	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
Part A	Mix Ratio by Weight: 20		
Part B	Mix Ratio by Weight: 5.0		
Shelf Life (23°C)	52	wk	
Additional Information	Nominal Value	Unit	Test Method
Degradation Temperature	430	°C	TGA
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)	2.26	GPa	
Weight Loss on Heating			
200°C	0.12	%	
250°C	0.13	%	
300°C	0.39	%	
Uncured Properties	Nominal Value	Unit	Test Method
Color			
-- ⁵	Clear/Transparent		
-- ⁶	Clear/Transparent		
Density			
Part B	0.868	g/cm ³	
Part A	1.15	g/cm ³	
Viscosity ⁷ (23°C)	0.10 to 0.20	Pa · s	
Curing Time (65°C)	2.0	hr	
Pot Life	60 to 120	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	85		
Lap Shear Strength (23°C)	> 13.8	MPa	
Relative Permittivity (1 kHz)	4.00		
Volume Resistivity (23°C)	> 1.0E+13	ohms · cm	
Dissipation Factor (1 kHz)	0.016		
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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