

EPO-TEK® 301-2

Epoxy; Epoxide
Epoxy Technology Inc.

Message:
EPO-TEK® 301-2 is a two component optical, medical, and semiconductor grade epoxy resin, with low viscosity, long pot-life, and good handling characteristics.

General Information		
Features	Biocompatible	
	Good Adhesion	
	Good Impact Resistance	
	Low to No Outgassing	
	Low Viscosity	
	Non-Toxic	
Uses	Adhesives	
	Bonding	
	Electrical/Electronic Applications	
	Impregnation Applications	
	Laminates	
	LCD Applications	
	LEDs	
	Medical/Healthcare Applications	
	Optical Applications	
	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	Casting	
	Encapsulating	
	Potting	
Physical	Nominal Value	Unit
Ion Type		
	Cl-	61 ppm

K+	Not Detectable		
Na+	104	ppm	
NH4+	Not Detectable		
Degradation Temperature	360	°C	TGA
Die Shear Strength - > 15 kg (23°C)	35.2	MPa	
Operating Temperature			
Continuous	-55 to 200	°C	
Intermittent	-55 to 300	°C	
Storage Modulus	2.06	GPa	
Weight Loss on Heating			
200°C	0.010	%	
250°C	0.46	%	
300°C	2.2	%	
Thermal	Nominal Value	Unit	
Glass Transition Temperature ¹	> 80.0	°C	
CLTE - Flow			
-- ²	6.1E-5	cm/cm/°C	
-- ³	1.8E-4	cm/cm/°C	
Optical	Nominal Value	Unit	
Refractive Index ⁴	1.532		
Transmittance			
320 nm	> 94.0	%	
400 to 1200 nm	> 99.0	%	
1200 to 1600 nm	> 98.0	%	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
Part A	Mix Ratio by Weight: 100		
Part B	Mix Ratio by Weight: 35		
Shelf Life (23°C)	52	wk	
Uncured Properties	Nominal Value	Unit	Test Method
Color			
-- ⁵	Clear/Transparent		
-- ⁶	Clear/Transparent		
Density			
Part B	0.888	g/cm ³	
Part A	1.02	g/cm ³	
Viscosity ⁷ (23°C)	0.23 to 0.43	Pa · s	
Curing Time (80°C)	3.0	hr	
Pot Life	480	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)	3.80	
Volume Resistivity	> 2.0E+12	ohms·cm
Dissipation Factor (1 kHz)	0.012	

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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