

EPO-TEK® 354

Epoxy; Epoxide
Epoxy Technology Inc.

Message:
EPO-TEK® 354 is a two component, high Tg epoxy designed for semiconductor packaging in medical, fiber optic and optoelectronic assemblies. It is an electrically and thermally insulating epoxy.

General Information			
Features	Autoclave Sterilizable		
	Biocompatible		
	Electrically Insulating		
	Good Adhesion		
	High Heat Resistance		
	Medium Viscosity		
	Thermally Insulating		
Uses	Adhesives		
	Electrical/Electronic Applications		
	Medical/Healthcare 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	Encapsulating		
	Potting		
Physical	Nominal Value	Unit	
Ion Type			
Cl-	81	ppm	
K+	9	ppm	
Na+	17	ppm	
NH4+	300	ppm	
Degradation Temperature	487	°C	TGA
Die Shear Strength - > 10 kg (23°C)	23.4	MPa	
Operating Temperature			

Continuous	-55 to 250	°C	
Intermittent	-55 to 350	°C	
Storage Modulus (23°C)	2.46	GPa	
Weight Loss on Heating			
200°C	0.50	%	
250°C	0.70	%	
300°C	0.85	%	
Thermal	Nominal Value	Unit	
Glass Transition Temperature ¹	> 95.0	°C	
CLTE - Flow			
-- ²	9.6E-5	cm/cm/°C	
-- ³	1.8E-4	cm/cm/°C	
Optical	Nominal Value	Unit	
Refractive Index ⁴	1.573		
Transmittance			
600 nm	> 96.0	%	
800 nm	> 99.0	%	
Thermoset	Nominal Value	Unit	Test Method
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	Test Method
Color			
-- ⁵	Amber		
-- ⁶	Clear/Transparent		
Density			
Part B	1.15	g/cm ³	
Part A	1.20	g/cm ³	
Viscosity ⁷ (23°C)	4.0 to 6.0	Pa · s	
Curing Time (150°C)	1.0	hr	
Pot Life	4300	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	82		
Lap Shear Strength (23°C)	11.5	MPa	
Relative Permittivity (1 kHz)	3.48		
Volume Resistivity (23°C)	> 2.0E+13	ohms · cm	
Dissipation Factor (1 kHz)	4.0E-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.	50 rpm

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