EPO-TEK® 921

Epoxy; Epoxide

Epoxy Technology Inc.

Message:

A two component, high Tg, electrically insulating, thermally conductive epoxy designed for thermal management applications found in semiconductor, hybrid microelectronics, PCB, and optical industries. It can be an adhesive for mounting heat sinks and substrates, a seal for many types of packages, or a thermal potting compound.

General Information			
Features	Electrically Insulating		
	Thermally Conductive		
Uses	Adhesives		
	Electrical/Electronic Applications		
	Optical Applications		
	Printed Circuit Boards		
	Seals		
Agency Ratings	EC 1907/2006 (REACH)		
	EU 2003/11/EC		
	EU 2006/122/EC		
RoHS Compliance	RoHS Compliant		
Forms	Paste		
Processing Method	Potting		
Physical	Nominal Value	Unit	
Particle Size	< 50.0	μm	
Degradation Temperature	356	°C	
Die Shear Strength - >20 kg (23°C)	46.9	MPa	
Operating Temperature			
Continuous	-55 to 200	°C	
Intermittent	-55 to 300	°C	
Storage Modulus (23°C)	7.15	GPa	
Thixotropic Index	2.50		
Weight Loss on Heating			
200°C	0.11	%	
250°C	0.20	%	
300°C	0.45	%	
Thermal	Nominal Value	Unit	
Glass Transition Temperature ¹	> 90.0	°C	
CLTE - Flow			

2	2.6E-5	cm/cm/°C	
3	9.7E-5	cm/cm/°C	
Thermal Conductivity	1.4	W/m/K	
Thermoset	Nominal Value	Unit	
Thermoset Components			
Part A	Mix Ratio by Weight: 100		
Part B	Mix Ratio by Weight: 2.2	Mix Ratio by Weight: 2.2	
Shelf Life (23°C)	26 wk		
Uncured Properties	Nominal Value	Unit	
Color			
4	Amber		
5	Grey		
Density			
Part B	1.02	g/cm³	
Part A	2.44	g/cm³	
Viscosity ⁶ (23°C)	20 to 40	Pa·s	
Curing Time (150°C)	1.0	hr	
Pot Life	360	min	
Cured Properties	Nominal Value	Unit	
Shore Hardness (Shore D)	93		
Lap Shear Strength (23°C)	12.5	MPa	
Relative Permittivity (1 kHz)	6.40		
Volume Resistivity (23°C)	> 8.0E+13	ohms·cm	
Dissipation Factor (1 kHz)	9.0E-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.	Part B		
5.	Part A		
6.	10 rpm		

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