

EPO-TEK® T7139

Epoxy; Epoxide

Epoxy Technology Inc.

Message:

EPO-TEK® T7139 is a two component, electrically insulating, encapsulating epoxy designed for semiconductor glob top applications and package assembly.

General Information		
Features	Electrically Insulating	
	Thixotropic	
Uses	Adhesives	
	Electrical/Electronic Applications	
Agency Ratings	EC 1907/2006 (REACH)	
	EU 2003/11/EC	
	EU 2006/122/EC	
RoHS Compliance	RoHS Compliant	
Forms	Paste	
Processing Method	Encapsulating	
Physical	Nominal Value	Unit
Particle Size	< 50.0	µm
Degradation Temperature	438	°C
Die Shear Strength - > 10 kg (23°C)	23.4	MPa
Operating Temperature		
Continuous	-55 to 250	°C
Intermittent	-55 to 350	°C
Storage Modulus	4.13	GPa
Thixotropic Index	2.50	
Weight Loss on Heating		
200°C	0.19	%
250°C	0.34	%
300°C	0.48	%
Thermal	Nominal Value	Unit
Glass Transition Temperature ¹	> 90.0	°C
CLTE - Flow		
-- ²	3.0E-5	cm/cm/°C
-- ³	7.6E-5	cm/cm/°C
Thermal Conductivity	0.43	W/m/K

Optical	Nominal Value	Unit	
Transmittance			
400 nm	< 0.0	%	
900 nm	< 1.0	%	
2000 nm	< 5.0	%	
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			
-- ⁴	Black		
-- ⁵	Tan		
Density			
Part A	1.31	g/cm ³	
Part B	1.34	g/cm ³	
Viscosity ⁶ (23°C)	5.0 to 7.0	Pa·s	
Curing Time (150°C)	1.0	hr	
Pot Life	1400	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	86		
Lap Shear Strength (23°C)	13.8	MPa	
Relative Permittivity (1 kHz)	3.39		
Volume Resistivity (23°C)	> 3.0E+12	ohms·cm	
Dissipation Factor (1 kHz)	6.0E-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 A		
5.	Part B		
6.	50 rpm		

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