EPO-TEK® T7109

Epoxy; Epoxide

Epoxy Technology Inc.

Message:

EPO-TEK® T7109 is a two component, thermally conductive epoxy designed for die attach and heat-sinking applications found in the semiconductor, hybrid, medical and optical industries.

General Information			
Features	Good Adhesion Thermally Conductive Thixotropic		
Uses	Adhesives Electrical/Electronic Applications LCD Applications Medical/Healthcare Applications Optical Applications		
Agency Ratings	EC 1907/2006 (REACH) EU 2003/11/EC EU 2006/122/EC		
RoHS Compliance	RoHS Compliant		
Forms	Paste		

Physical	Nominal Value	Unit	
Particle Size	< 20.0	µm	
Degradation Temperature	377	°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 (23°C)	1.78	GPa	
Thixotropic Index	1.79		
Weight Loss on Heating			
200°C	0.020	%	
250°C	0.25	%	
300°C	0.98	%	

Thermal	Nominal Value	Unit	
Glass Transition Temperature [1]	> 45.0	°C	
CLTE - Flow			

-- [2]	4.6E-5	cm/cm/°C	
-- [3]	2.4E-4	cm/cm/°C	
Thermal Conductivity			
-- [4]	0.70	W/m/K	
-- [5]	1.5	W/m/K	
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			
-- [6]	Amber		
-- [7]	White		
Density			
Part B	1.02	g/cm^3	
Part A	1.33	g/cm^3	
Viscosity [8] (23°C)	14 to 20	Pa·s	
Curing Time (150°C)	1.0	hr	
Pot Life	240	min	
Cured Properties	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D)	83		
Lap Shear Strength (23°C)	> 13.8	MPa	
Relative Permittivity (1 kHz)	3.50		
Volume Resistivity (23°C)	> 8.0E+12	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.	40 mil
5.	3 mil
6.	Part B
7.	Part A
8.	20 rpm

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