EPO-TEK® H70E-4

Epoxy; Epoxide

Epoxy Technology Inc.

Message:

EPO-TEK® H70E-4 is a two component, thermally conductive, electrically insulating epoxy adhesive for semiconductor, micro-electronic and opto-electronic packaging. It may be used for heat sinking power devices in the form of hybrid circuits or at the SMD / PCB level.

General Information			
Features	Electrically Insulating		
	Good Adhesion		
	Thermally Conductive		
	Thixotropic		
Uses	Adhesives		
	Bonding		
	Electrical/Electronic Applications		
	Printed Circuit Boards		
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	432	°C	TGA
Die Shear Strength - >5 kg (23°C)	11.7	MPa	
Operating Temperature			
Continuous	-55 to 200	°C	
Intermittent	-55 to 300	°C	
Storage Modulus (23°C)	2.87	GPa	
Thixotropic Index	3.20		
Weight Loss on Heating			
200°C	0.57	%	
250°C	1.5	%	
300°C	3.1	%	
Thermal	**Nominal Value**	**Unit**	
Glass Transition Temperature [1]	> 80.0	°C	
CLTE - Flow			

-- [2]	1.7E-5	cm/cm/°C	
-- [3]	7.7E-5	cm/cm/°C	
Thermal Conductivity	0.57	W/m/K	
Thermoset	**Nominal Value**	**Unit**	**Test Method**
Thermoset Components			
Part A	Mix Ratio by Weight: 1.0		
Part B	Mix Ratio by Weight: 1.0		
Shelf Life (23°C)	52	wk	
Uncured Properties	**Nominal Value**	**Unit**	**Test Method**
Color			
-- [4]	Grey		
-- [5]	Grey		
Density			
Part A	1.61	g/cm³	
Part B	2.01	g/cm³	
Viscosity [6] (23°C)	20 to 40	Pa·s	
Curing Time (150°C)	1.0	hr	
Pot Life	3600	min	
Cured Properties	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D)	67		
Lap Shear Strength (23°C)	7.38	MPa	
Relative Permittivity (1 kHz)	4.81		
Volume Resistivity (23°C)	> 2.5E+13	ohms·cm	
Dissipation Factor (1 kHz)	0.018		

NOTE	
1.	Dynamic Cure 20-200°C/ISO 25 Min; Ramp -40-200°C @ 20°C/Min
2.	Below Tg
3.	Above Tg
4.	Part B
5.	Part A
6.	10 rpm

Recommended distributors for this material

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