

EPO-TEK® H70E-175

Epoxy; Epoxide

Epoxy Technology Inc.

Message:

EPO-TEK® H70E-175 is a two component, thermally conductive, electrically insulating epoxy adhesive for semiconductor, microelectronic and opto-electronic packaging. It may be used in aluminum heat sinking power devices in the form of hybrid circuits or at the SMD/PCB level.

General Information		
Features	Electrically Insulating	
	Thermally Conductive	
Uses	Adhesives	
	Electrical/Electronic Applications	
	Military Applications	
	Optical 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	392	°C
Die Shear Strength - >4 kg (23°C)	9.38	MPa
Operating Temperature		
Continuous	-55 to 200	°C
Intermittent	-55 to 300	°C
Storage Modulus (23°C)	5.22	GPa
Thixotropic Index	2.55	
Weight Loss on Heating		
200°C	0.59	%
250°C	1.4	%
300°C	3.3	%
Thermal	Nominal Value	Unit
Glass Transition Temperature ¹	> 70.0	°C
CLTE - Flow		
-- ²	2.6E-5	cm/cm/°C

-- ³	8.4E-5	cm/cm/°C	
Thermal Conductivity	0.32	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	1.36	g/cm ³	
Part B	1.92	g/cm ³	
Viscosity ⁶ (23°C)	5.0 to 11	Pa·s	
Curing Time (180°C)	1.0	hr	
Pot Life	2900	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	88		
Lap Shear Strength (23°C)	> 13.8	MPa	
Relative Permittivity (1 kHz)	4.72		
Volume Resistivity (23°C)	2.0E+13	ohms·cm	
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.	20 rpm		

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