

Product Information Sheet

MATERIAL ID:

EPO-TEK® H70E-2LC

Date: 08/2005

Per:

Rev: III

Material Description:

A two component, thermally conductive, electrically insulating epoxy designed for glob-top chip protection in TAB and COB die-attach technologies. It is used to prevent chips from being mechanically damaged during micro-package assembly and handling.

Number of Components:

Two

Mix Ratio by weight:

1:1

Cure Schedule (minimum)

175°C/1 Minute - 150°C/5 Minutes - 120°C/15 Minutes - 80°C/90 Minutes

Specific Gravity:

--- Part A: 1.63 Part B: 2.31

Pot Life:

2.5 Days

Shelf Life:

One year at room temperature

NOTE: Container(s) should be kept closed when not in use. Filled systems should be stirred thoroughly before mixing and prior to use

MATERIAL CHARACTERISTICS: *To be used as a guide only, not as a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results; Cure condition: 150°C/1 hour*
 * denotes test on lot acceptance basis

PHYSICAL PROPERTIES:			
*Color (before cure):	Part A: Black Part B: Cream	Weight Loss:	
*Consistency:	Smooth thixotropic paste	@ 200°C:	
*Viscosity (23°C):		@ 250°C:	0.67 %
@ 20 rpm	6,500 - 9,500 cPs	@ 300°C:	
Thixotropic Index:	3.26	Operating Temp:	
*Glass Transition Temp:	≥ 60 °C (Dynamic Cure 20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	Continuous:	- 55°C to + 175°C
Coefficient of Thermal Expansion (CTE):		Intermittent:	- 55°C to + 350°C
Below Tg:	18 x 10 ⁻⁶ in/in°C	Storage Modulus @ 23°C:	924,607 psi
Above Tg:	75 x 10 ⁻⁶ in/in°C	Ion Content:	
Shore D Hardness:	72	Cl ⁻ :	194 ppm
Lap Shear @ 23°C:	1.968 psi	NH ₄ ⁺ :	
Die Shear @ 23°C:	≥ 10 Kg / 3,400 psi	Na ⁺ :	
Degradation Temp:	400 °C	K ⁺ :	
		*Particle Size:	≤ 50 microns
ELECTRICAL AND THERMAL PROPERTIES:			
Thermal Conductivity:	0.79 W/mK	Dielectric Constant (1KHz):	5.05
*Volume Resistivity @ 23°C:	≥ 1.5x10 ¹³ Ohm-cm	Dissipation Factor (1KHz):	0.0066
OPTICAL PROPERTIES @ 23°C:			
Spectral Transmission:	N/A	Index of Refraction:	N/A