



## Product Information Sheet

### EPO-TEK® H70E-2LC

**Date:** September 2017  
**Rev:** IV  
**No. of Components:** Two  
**Mix Ratio by Weight:** 1 : 1  
**Specific Gravity:** Part A: 1.63      Part B: 2.31  
**Pot Life:** 2.5 Days  
**Shelf Life- Bulk:** One year at room temperature

**Recommended Cure: 150°C / 1 Hour**

Minimum Alternative Cure(s):  
*May not achieve performance properties listed below*  
 175°C / 1 Minute  
 150°C / 5 Minutes  
 120°C / 15 Minutes  
 80°C / 90 Minutes

**NOTES:**

- Container(s) should be kept closed when not in use.
- Filled systems should be stirred thoroughly before mixing and prior to use.
- Performance properties (rheology, conductivity, others) of the product may vary from those stated on the data sheet when bi-pak/syringe packaging or post-processing of any kind is performed. Epoxy's warranties shall not apply to any products that have been reprocessed or repackaged from Epoxy's delivered status/container into any other containers of any kind, including but not limited to syringes, bi-paks, cartridges, pouches, tubes, capsules, films or other packages.

**Product 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.

**Typical Properties:** Cure condition: 150°C / 1 Hour      Different batches, conditions & applications yield differing results.  
 Data below is not guaranteed. To be used as a guide only, not as a specification. \* denotes test on lot acceptance basis

PHYSICAL PROPERTIES:			
* Color (before cure):	Part A: Black	Part B: Cream	
* Consistency:	Smooth thixotropic paste		
* Viscosity (23°C) @ 20 rpm:	6,500 - 9,500	cPs	
Thixotropic Index:	3.3		
* Glass Transition Temp:	≥ 60	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):			
Below Tg:	18	x 10 <sup>-6</sup> in/in°C	
Above Tg:	75	x 10 <sup>-6</sup> in/in°C	
Shore D Hardness:	72		
Lap Shear @ 23°C:	1,968	psi	
Die Shear @ 23°C:	≥ 10	Kg	3,556 psi
Degradation Temp:	400 °C		
Weight Loss:			
@ 250°C:	0.67	%	
Suggested Operating Temperature:	< 350	°C (Intermittent)	
Storage Modulus:	924,607	psi	
Ion Content:	Cl: 194	ppm	
* Particle Size:	≤ 50	microns	

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	0.8	W/mK
Volume Resistivity @ 23°C:	≥ 1.5 x 10 <sup>13</sup>	Ohm-cm
Dielectric Constant (1KHz):	5.05	
Dissipation Factor (1KHz):	0.007	

**This information is based on data and tests believed to be accurate. Epoxy Technology, Inc. makes no warranties (expressed or implied) as to its accuracy and assumes no liability in connection with any use of this product.**

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