



## Preliminary Product Information Sheet

### **EPO-TEK® H70E-TI-LH (formerly 108-115)**

*Note: These are typical properties to be used as a guide only, not a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results.*

**Date:** September 2017  
**Rev:** V  
**No. of Components:** Two  
**Mix Ratio by Weight:** 1 : 1  
**Specific Gravity:** Part A: 1.43 Part B: 1.80  
**Pot Life:** 2 Days  
**Shelf Life- Bulk:** One year at room temperature

**Recommended Cure: 150°C / 1 Hour**

#### **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, low halogen, electrically insulating epoxy designed for chip bonding in microelectronic and optoelectronic applications.

#### **MATERIAL CHARACTERISTICS\*:**

<b>PHYSICAL PROPERTIES:</b>	<b>Cure condition: 150°C / 1 Hour</b>	
Color (before cure):	Part A: Cream	Part B: Cream
Consistency:	Pourable paste	
Viscosity (23°C) @ 100 rpm:	2,767	cPs
Thixotropic Index:	2.1	
Glass Transition Temp:	74	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):		
Below Tg:	46	x 10 <sup>-6</sup> in/in°C
Above Tg:	191	x 10 <sup>-6</sup> in/in°C
Shore D Hardness:	75	
Lap Shear @ 23°C:	1,410	psi
Die Shear @ 23°C:	10	Kg
Degradation Temp:	406	°C
Weight Loss:		
@ 200°C:	0.76	%
@ 250°C:	2.24	%
@ 300°C:	3.45	%
Suggested Operating Temperature:	< 300	°C (Intermittent)
Storage Modulus:	548,071	psi
Particle Size:	≤ 20	microns

<b>ELECTRICAL AND THERMAL PROPERTIES:</b>		
Thermal Conductivity:	0.6	W/mK
Volume Resistivity @ 23°C:	≥ 5 x 10 <sup>13</sup>	Ohm-cm
Dielectric Constant (1KHz):	4.23	
Dissipation Factor (1KHz):	0.004	

**The data above is INITIAL only - it may be changed at any time, for any reason without notice to anyone. It is provided only as a guide for evaluation/consideration.**

\* These material characteristics are typical properties that are based on a limited number of samples/batches. All properties are based on the cure indicated above. Some properties may vary as manufactured quantities are scaled up to commercialized production levels.