Product Information Sheet

EPO-TEK® H70E-1

Date:	July 2019
Rev:	VI
No. of Components:	Two
Mix Ratio by Weight:	1 : 1
Specific Gravity:	Part A: 1.63 Part B: 2.38
Pot Life:	2 Days
Shelf Life- Bulk:	Six months at room temperature
Shelf Life- Syringe:	Six months at -40°C

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 adhesive designed for semiconductor and microelectronic packaging. It is most commonly used for die-attach and heat sinking applications.

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: Light grey	Part B: Dark grey
* Consistency:		Smooth paste	
* Viscosity (23°C) @ 10 rpm:		24,000-34,000	cPs
Thixotropic Index:		4.9	
* Glass Transition Temp:		≥ 80	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	21	x 10^{-6} in/in°C
	Above Tg:	105	x 10^{-6} in/in°C
Shore D Hardness:		88	
Lap Shear @ 23°C:		1,812	psi
Die Shear @ 23°C:		≥ 5	Kg 1,778 psi
Degradation Temp:		450	°C
Weight Loss:			
	@ 200°C:	0.06	%
	@ 250°C:	0.34	%
	@ 300°C:	1.20	%
Suggested Operating Temperature:		< 300	°C (Intermittent)
Storage Modulus:		967,730	psi
* Particle Size:		≤ 50	microns

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	0.7	W/mK
Volume Resistivity @ 23°C:	≥ 1.5 x 10^{13}	Ohm-cm
Dielectric Constant (1KHz):	4.47	
Dissipation Factor (1KHz):	0.009	

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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