

**Date:** November 2019  
**Rev:** VII  
**No. of Components:** Two  
**Mix Ratio by Weight:** 1 : 1  
**Specific Gravity:** Part A: 2.44      Part B: 3.07  
**Pot Life:** 3.5 Days  
**Shelf Life- Bulk:** One year at room temperature

**Recommended Cure: 180°C / 1 Hour**

Minimum Alternative Cure(s):  
*May not achieve performance properties listed below*  
 150°C / 2 Hours

**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:** EPO-TEK® H20E-175 is a two component epoxy designed for semiconductor die-attach. It is a higher Tg version of EPO-TEK® H20E. It was designed to be used in semiconductor / JEDEC packaging, microelectronic packaging of hybrids, as well as high temperature devices and assembly.

**Typical Properties:** Cure condition: 180°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: Silver	Part B: Silver	
* Consistency:	Smooth thixotropic paste		
* Viscosity (23°C) @ 100 rpm:	2,800 - 3,800	cPs	
Thixotropic Index:	3.1		
* Glass Transition Temp:	≥ 85	°C (Dynamic Cure: 20-250°C/ISO 25 Min; Ramp -10-250°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):			
Below Tg:	20	x 10 <sup>-6</sup> in/in°C	
Above Tg:	88	x 10 <sup>-6</sup> in/in°C	
Shore D Hardness:	70		
Lap Shear @ 23°C:	1,292	psi	
Die Shear @ 23°C:	≥ 10	Kg	3,556 psi
Degradation Temp:	450	°C	
Weight Loss:			
@ 200°C:	0.05	%	
@ 250°C:	0.11	%	
@ 300°C:	0.25	%	
Suggested Operating Temperature:	< 350	°C (Intermittent)	
Storage Modulus:	628,212	psi	
* Particle Size:	≤ 45	microns	

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	2.0	W/mK
* Volume Resistivity @ 23°C:	≤ 0.0004	Ohm-cm

Epoxy Technology, Inc. Epoxies and Adhesives for Demanding Applications™

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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**EPO-TEK® H20E-175 Advantages & Suggested Application Notes:**

- Thixotropic paste-like rheology allows for high speed dispensing and screen printing operations. It can also be applied by hand techniques using spatula, toothpick, or stamping chuck.
- Suggested for Rf/Microwave device packaging found in military, commercial, aerospace and cockpit, and industrial (down-hole petrochemical) circuits.
- > 3 day pot-life allows for mass production yielding low waste.

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