

**Date:** February 2021  
**Rev:** V  
**No. of Components:** Single  
**Mix Ratio by Weight:** N/A  
**Specific Gravity:** 3.03  
**Pot Life:** 3 Days  
**Shelf Life- Syringe:** One year at -40°C

**Recommended Cure: 150°C / 1 Hour**

Minimum Alternative Cure(s):

*May not achieve performance properties listed below*  
 175°C / 45 Seconds  
 150°C / 5 Minutes  
 120°C / 15 Minutes  
 100°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-D is a single component, 100% solids, silver-filled epoxy designed for electrically and thermally conductive bonds. It is an enhanced version of EPO-TEK® H20E.

**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):	Silver		
* Consistency:	Smooth thixotropic paste		
* Viscosity (23°C) @ 100 rpm:	1,400 - 2,400	cPs	
Thixotropic Index:	4.8		
* 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:	47	x 10 <sup>-6</sup> in/in°C
	Above Tg:	198	x 10 <sup>-6</sup> in/in°C
Shore D Hardness:	72		
Lap Shear @ 23°C:	1,328	psi	
Die Shear @ 23°C:	≥ 10	Kg	3,556 psi
Degradation Temp:	407	°C	
Weight Loss:			
	@ 200°C:	0.48	%
	@ 250°C:	1.07	%
	@ 300°C:	1.66	%
Suggested Operating Temperature:	< 300	°C	(Intermittent)
Storage Modulus:	964,414	psi	
Ion Content:			
	Cl <sup>-</sup> :	93 ppm	Na <sup>+</sup> : 18 ppm
	NH <sub>4</sub> <sup>+</sup> :	131 ppm	K <sup>+</sup> : 9 ppm
* Particle Size:	≤ 45	microns	
ELECTRICAL AND THERMAL PROPERTIES:			
Thermal Conductivity:	3.3	W/mK	
* Volume Resistivity @ 23°C:	≤ 0.0004	Ohm-cm	

**Epoxyes 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.

EPOXY TECHNOLOGY, INC.

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[www.epotek.com](http://www.epotek.com)

**EPO-TEK<sup>®</sup> H20E-D Advantages & Suggested Application Notes:**

- Optimal for syringe dispensing including time/pressure dispensing, auger screw and jetting.
- Reliable dispensability; shown 10,000 dots with less than 1% skips
- Used extensively for thermal management applications such as LEDs and power devices due to its high thermal conductivity.
- Versatile cure options including box oven, SMT style tunnel oven, heater gun, hot plate, IR convection and inductor coil.

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