

**Date:** July 2019  
**Rev:** XII  
**No. of Components:** Two  
**Mix Ratio by Weight:** 1 : 1  
**Specific Gravity:** Part A: 1.74 Part B: 3.07  
**Pot Life:** 3 Days  
**Shelf Life- Bulk:** One year 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*

150°C / 5 Minutes

120°C / 15 Minutes

100°C / 45 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:** EPO-TEK® H20S is a modified version of EPO-TEK® H20E, designed primarily for die stamping and dispensing techniques for chip bonding. EPO-TEK® H20S is a highly reliable, two component, silver-filled epoxy with a smooth, thixotropic consistency. In addition to the high electrical conductivity, the short curing cycles, the proven reliability, and the convenient mix ratio, EPO-TEK® H20S is extremely simple to use.

**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: Silver	Part B: Silver
* Consistency:	Smooth thixotropic paste	
* Viscosity (23°C) @ 100 rpm:	1,800 - 2,800	cPs
Thixotropic Index:	5.0	
* 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:	31	x 10 <sup>-6</sup> in/in°C
Above Tg:	120	x 10 <sup>-6</sup> in/in°C
Shore D Hardness:	64	
Lap Shear @ 23°C:	1,240	psi
Die Shear @ 23°C:	≥ 5	Kg 1,778 psi
Degradation Temp:	414	°C
Weight Loss:		
@ 200°C:	0.40	%
@ 250°C:	0.60	%
@ 300°C:	1.37	%
Suggested Operating Temperature:	< 300	°C (Intermittent)
Storage Modulus:	339,720	psi
Ion Content:		
Cl <sup>-</sup> :	162 ppm	Na <sup>+</sup> : 0 ppm
NH <sub>4</sub> <sup>+</sup> :	282 ppm	K <sup>+</sup> : 4 ppm
* Particle Size:	≤ 20	microns

### ELECTRICAL AND THERMAL PROPERTIES:

Thermal Conductivity:	3.3	W/mK
* Volume Resistivity @ 23°C:	≤ 0.0005	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.

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