EPO-TEK® H20E-PFC-T

Technical Data Sheet
For Reference Only
Electrically Conductive, Silver Epoxy

Date:	February 2021	**Recommended Cure: 150°C / 1 Hour**
Rev:	II	
No. of Components:	Two	
Mix Ratio by Weight:	1 : 1	
Specific Gravity:	Part A: 3.09 Part B: 4.45	
Pot Life:	3 Days	
Shelf Life- Bulk:	One year at room temperature	

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-PFC-T (*formerly R&D #111-16-2)* is a two component, semiconductor grade epoxy, designed as a higher viscosity version of EPO-TEK® H20E-PFC.

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) @ 50 rpm:	7,373	cPs
Thixotropic Index:	6.9	
* Glass Transition Temp:	92	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Shore D Hardness:	52	
Die Shear @ 23°C:	10	Kg
Degradation Temp:	391	°C
Weight Loss:		
@ 200°C:	0.02	%
@ 250°C:	0.18	%
@ 300°C:	0.59	%
Suggested Operating Temperature:	< 325	°C (Intermittent)
* Particle Size:	≤ 20	microns

ELECTRICAL AND THERMAL PROPERTIES:		
* Volume Resistivity @ 23°C:	≤ 0.0004	Ohm-cm

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EPO-TEK® H20E-PFC-T Advantages & Suggested Application Notes:

- Stencil printing of small dots or “bumps” the size of 4 mil diameter with 8 mil pitch can be achieved.
- Product may be applied at the wafer level, single-chip level, or bumping of substrates.
- Final system packaging can be hermetic micro-electronic cases or open-faced circuits protected via underfill, glob-top, housing, or potting resins.
- Low temperature cure capable between 80°C – 100°C allows for lower cost plastic substrates / housings to be used.
- Suggested for flip chip packaging applications found in memory devices (SRAM, DRAM), 3D chip stacking, RFID & smart-cards, military, and medical devices such as photo-diode arrays in x-ray detection circuits.
- Compatible with Au, Cu, Ag, Ag-Pd component or substrate metallization.
- Recommended to be used with chips or wafers which have UBM layer already deposited.
- Compatible with automated dispensing equipment, dotting >120μm diameter can be realized, or >200μm diameter in high pin count arrays.

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