EPO-TEK® H20E-175

Technical Data Sheet
For Reference Only
Electrically Conductive, Silver Epoxy

Date:	March 2022	
Rev:	IX	
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	
Shelf Life- Syringe:	One year at -40°C	

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 -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):		
Below Tg:	20	x 10^{-6} in/in°C
Above Tg:	88	x 10^{-6} 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.
14 FORTUNE DRIVE, BILLERICA, MA 01821 (978) 667-3805, FAX (978) 663-9782
www.epotek.com
A Meridian Adhesives Group Company

EPO-TEK® H20E-175

Technical Data Sheet
For Reference Only
Electrically Conductive, Silver Epoxy

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.

EPOXY TECHNOLOGY, INC.
14 FORTUNE DRIVE, BILLERICA, MA 01821 (978) 667-3805, FAX (978) 663-9782
www.epotek.com
A Meridian Adhesives Group Company