

**Date:** September 2017  
**Rev:** VIII  
**No. of Components:** Single  
**Mix Ratio by Weight:** N/A  
**Specific Gravity:** 3.07  
**Pot Life:** 28 Days  
**Shelf Life- Bulk:** One year at -40°C

**Recommended Cure: 180°C / 1 Hour**

Minimum Alternative Cure(s):  
*May not achieve performance properties listed below*  
 165°C / 1.5 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.
- Complies with the requirements of MIL-STD 883/Method 5011.

**Product Description:** EPO-TEK® H35-175MP is a single component, silver-filled epoxy for hybrid die and component attach.

**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):	Bright Silver		
* Consistency:	Smooth thixotropic paste		
* Viscosity (23°C) @ 10 rpm:	22,000-28,000	cPs	
Thixotropic Index:	4.0		
* Glass Transition Temp:	≥ 100 °C (Dynamic Cure: 20-300°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:	97	x 10 <sup>-6</sup> in/in°C
Shore D Hardness:	83		
Lap Shear @ 23°C:	> 2,000	psi	
* Die Shear @ 23°C:	≥ 10	Kg	3,556 psi
Degradation Temp:	372 °C		
Weight Loss:			
	* @ 200°C:	0.13	%
	@ 250°C:	0.14	%
	@ 300°C:	0.28	%
Suggested Operating Temperature:	< 300 °C (Intermittent)		
Storage Modulus:	1,106,623	psi	
* Ion Content:	Cl <sup>-</sup> :	< 200 ppm	Na <sup>+</sup> : < 50 ppm
	NH <sub>4</sub> <sup>+</sup> :	39 ppm	K <sup>+</sup> : < 50 ppm
* Particle Size:	≤ 20 microns		

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	1.5	W/mK
* Volume Resistivity @ 23°C:	≤ 0.0005	Ohm-cm
Dielectric Constant (1KHz):	N/A	
Dissipation Factor (1KHz):	N/A	

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® H35-175MP Advantages & Suggested Application Notes:**

- Exhibits a smooth, flowing consistency that is adaptable to conventional processing methods such as dispensing and screen printing. See Technical Paper #43 from our website link for hints and best practices for high speed auger screw dispensing – <http://www.epotek.com/technical-papers.asp>.
- Performs exceptionally well as a die attach for small chips such as GaAs, LEDs and diodes.
- Capable of resisting 260°C green reflow process, low outgassing in hermetic lid-seal processes near 300°C, and organic burn-in up to 150°C/1000 hours storage.
- Certified to MIL-STD 883/Test Method 5011 –yields low levels of water extractable monovalent ions such as Chlorides.
- Passes NASA low outgassing standard ASTM E595 with proper cure - <http://outgassing.nasa.gov/>.
- Capable of JEDEC Level II die-attach packaging on die-paddles and lead-frames.
- Widely used epoxy; popular choice for silver-filled epoxies; opto-packaging, hybrids, and many types of substrates including kovar, ceramic and BT.
- Available in many different viscosity ranges – contact Technical Services at [techserv@epotek.com](mailto:techserv@epotek.com) for best recommendation.

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