

**Date:** February 2021  
**Rev:** X  
**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  
**Shelf Life- Syringe:** Six months at -40°C

**Recommended Cure:** 150°C / 1 Hour

**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® H37-MP is a single component, electrically conductive, thixotropic silver-filled adhesive for die-attach and SMD attach inside hybrid microelectronic packages. Also available in a frozen syringe.

**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 flowing paste		
* Viscosity (23°C) @ 10 rpm:	22,000-26,000	cPs	
Thixotropic Index:	3.6		
* Glass Transition Temp:	≥ 90	°C (Dynamic Cure: 20-300°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	52	x 10 <sup>-6</sup> in/in°C
	Above Tg:	148	x 10 <sup>-6</sup> in/in°C
Shore D Hardness:	80		
Lap Shear @ 23°C:	1,880	psi	
* Die Shear @ 23°C:	≥ 10	Kg	3,556 psi
Degradation Temp:	358	°C	
Weight Loss:			
	* @ 200°C:	0.13	%
	@ 250°C:	0.41	%
	@ 300°C:	0.80	%
Suggested Operating Temperature:	< 300 °C (Intermittent)		
Storage Modulus:	727,680	psi	
* Ion Content:	Cl <sup>-</sup> :	< 200 ppm	Na <sup>+</sup> : < 50 ppm
	NH <sub>4</sub> <sup>+</sup> :	65 ppm	K <sup>+</sup> : < 50 ppm
* Particle Size:	≤ 20 microns		

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	1.6	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<sup>®</sup> H37-MP Advantages & Suggested Application Notes:**

- Complies with MIL-STD 883/Test Method 5011.
- Can be considered a lower stress, and lower cure temperature alternative to EPO-TEK<sup>®</sup> H35-175MP.
- Compliant material; eliminates cracking when bonding large components or substrates.
- Excellent adhesion to ceramic, Si, Au, kovar, Au/kovar and AgPd.
- May also be used on lead-frames and die-paddles compatible with JEDEC plastic IC packaging.
- Adaptable to conventional processing methods such as automatic dispensing or screen printing.
- Passes NASA low outgassing standard ASTM E595 with proper cure - <http://outgassing.nasa.gov/>.

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