

Date: March 2020
Rev: VII
No. of Components: Single
Mix Ratio by Weight: N/A
Specific Gravity: 3.65
Pot Life: 28 Days
Shelf Life: 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® H35-175MPT 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):	Silver		
* Consistency:	Smooth thixotropic paste		
* Viscosity (23°C) @ 2.5 rpm:	90,000-110,000	cPs	
Thixotropic Index:	4.6		
* 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:	35	x 10 ⁻⁶ in/in°C	
Above Tg:	123	x 10 ⁻⁶ in/in°C	
Shore D Hardness:	83		
Lap Shear @ 23°C:	1,693	psi	
* Die Shear @ 23°C:	≥ 10	Kg	3,556 psi
Degradation Temp:	354 °C		
Weight Loss:			
* @ 200°C:	0.03	%	
@ 250°C:	0.05	%	
@ 300°C:	0.13	%	
Suggested Operating Temperature:	< 300 °C (Intermittent)		
Storage Modulus:	423,781	psi	
* Ion Content:	Cl ⁻ : < 200 ppm	Na ⁺ :	< 50 ppm
	NH ₄ ⁺ : 32 ppm	K ⁺ :	< 50 ppm
* Particle Size:	≤ 20 microns		

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	2.7	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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EPO-TEK® H35-175MPT Advantages & Suggested Application Notes:

- This epoxy can be classified as a higher viscosity version of EPO-TEK® H35-175MP, suggested for the following purposes:
 - Used for improved stencil printing via small apertures (not for dispensing).
 - Less flow-out between small pads like 0402 or 0603 caps and resistors.
- 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.
- 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

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