

Number of Components:	Single	Minimum Bond Line Cure Schedule**:	
Mix Ratio By Weight:	N/A	180°C	1 Hour
Specific Gravity:	3.07	165°C	1.5 Hours
Part A:	N/A		
Part B:	N/A		
Pot Life*:	28 Days		
Shelf Life:	One year at -40°C		

Note: Container(s) should be kept closed when not in use. For filled systems, mix contents of container thoroughly.

\*Complies with MIL-STD-883, Method 5011 Section 3.4.3

\*\*Please see Applications Note available on our website. Material should be brought to room temperature before opening the container.

### Product Description:

EPO-TEK<sup>®</sup> H35-175MP is a single component, silver-filled epoxy for military hybrid die and component attach.

### EPO-TEK<sup>®</sup> H35-175MP Advantages & 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.

**Typical Properties:** (To be used as a guide only, not as a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results; Cure condition: 180°C/1 hour; \* denotes test on lot acceptance basis)

Physical Properties:	
*Color: Bright Silver	Weight Loss:
*Consistency: Smooth, Thixotropic Paste	* @ 200°C: 0.13%
*Viscosity (@ 10 RPM/23°C): 22,000 – 28,000 cPs	@ 250°C: 0.14%
Thixotropic Index: 4.0	@ 300°C: 0.28%
*Glass Transition Temp.(Tg): ≥ 100°C (Dynamic Cure 20—300°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	Operating Temp:
Coefficient of Thermal Expansion (CTE):	Continuous: - 55°C to 200°C
Below Tg: 31 x 10 <sup>-6</sup> in/in/°C	Intermittent: - 55°C to 300°C
Above Tg: 97 x 10 <sup>-6</sup> in/in/°C	Storage Modulus @ 23°C: 1,106,623 psi
Shore D Hardness: 83	*Ions: Cl <sup>-</sup> < 200 ppm
Lap Shear Strength @ 23°C: > 2,000 psi	Na <sup>+</sup> < 50 ppm
*Die Shear Strength @ 23°C: ≥ 10 Kg / 3,400 psi	NH <sub>4</sub> <sup>+</sup> 39 ppm
Degradation Temp. (TGA): 372°C	K <sup>+</sup> < 50 ppm
	*Particle Size: ≤ 20 Microns
Electrical Properties:	
*Volume Resistivity @ 23°C: ≤ 0.0005 Ohm-cm	
Thermal Properties:	
Thermal Conductivity: 1.5 W/mK	

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