EPOXY TECHNOLOGY

EPO-TEK® H35-175MPLV

Technical Data Sheet

For Reference Only

Thermally and Electrically Conductive Epoxy

Number of Components:	Single	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	N/A	180°C	1 Hour
Specific Gravity:	2.65	165°C	1.5 Hours
Part A			
Part B			
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 prior to use.
**Please see Applications Note available on our website.*

Product Description:

EPO-TEK® H35-175MPLV is a single component, silver-filled epoxy for military hybrid die and component attach. It is a lower viscosity version of EPO-TEK® H35-175MP.

EPO-TEK® H35-175MPLV Advantages & Application Notes:

- 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.
- 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 alternatives – contact Technical Services at techserv@epotek.com for best recommendation.
- Designed for improved flow for smaller needle gauge dispensing, or stamping operations.

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:** Silver	**Weight Loss:**
***Consistency:** Smooth paste	***@ 200°C:** 0.04%
***Viscosity (@ 10 RPM/23°C):** 10,500 – 16,500 cPs	**@ 250°C:** 0.06%
Thixotropic Index: 2.66	**@ 300°C:** 0.19%
***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 180°C
	Intermittent: - 55°C to 280°C
Below Tg: 47×10^{-6} in/in/°C	**Storage Modulus @ 23°C:** 494,899 psi
Above Tg: 190×10^{-6} in/in/°C	***Ions:** Cl^- < 200 ppm
Shore D Hardness: 75	Na^+ < 50 ppm
Lap Shear Strength @ 23°C: 1,864 psi	NH_4^+ 65 ppm
***Die Shear Strength @ 23°C:** ≥ 10 Kg / 3,400 psi	K^+ < 50 ppm
Degradation Temp. (TGA): 330°C	***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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