EPO-TEK® H35-175MPLV

Technical Data Sheet

For Reference Only

Thermally and Electrically Conductive Epoxy

Number of Components:	Single
Mix Ratio By Weight:	N/A
Specific Gravity:	2.65
Part A	
Part B	
Pot Life*:	28 Days
Shelf Life:	One year at -40°C

Minimum Bond Line Cure Schedule**:

180°C	1 Hour
165°C	1.5 Hours

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.*

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
***Consistency:** Smooth paste
***Viscosity (@ 10 RPM/23°C):** 10,500 – 16,500 cPs
Thixotropic Index: 2.66
***Glass Transition Temp.(Tg):** ≥ 100°C (Dynamic Cure 20—300°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)
Coefficient of Thermal Expansion (CTE):
Below Tg: 47 x 10^{-6} in/in/°C
Above Tg: 190 x 10^{-6} in/in/°C
Shore D Hardness: 75
Lap Shear Strength @ 23°C: 1,864 psi
***Die Shear Strength @ 23°C:** ≥ 10 Kg / 3,400 psi
Degradation Temp. (TGA): 330°C

Weight Loss:
***@ 200°C:** 0.04%
@ 250°C: 0.06%
@ 300°C: 0.19%
Operating Temp:
Continuous: - 55°C to 180°C
Intermittent: - 55°C to 280°C
Storage Modulus @ 23°C: 494,899 psi
***Ions:** Cl^- < 200 ppm
Na^+ < 50 ppm
NH_4^+ 65 ppm
K^+ < 50 ppm
***Particle Size:** ≤ 20 Microns

Electrical Properties:

***Volume Resistivity @ 23°C:** ≤ 0.0005 Ohm-cm

Thermal Properties:

Thermal Conductivity: 1.5 W/mK

EPOXY TECHNOLOGY, INC.
14 Fortune Drive, Billerica, MA 01821-3972 **Phone**: 978.667.3805 **Fax**: 978.663.9782
www.EPOTEK.com

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