

Number of Components: Single

Mix Ratio By Weight: N/A

Specific Gravity: 3.07

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.*

*\*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.*

Minimum Bond Line Cure Schedule\*\*:

150°C

1 Hour

### Product Description:

EPO-TEK<sup>®</sup> 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.

### EPO-TEK<sup>®</sup> H37-MP Advantages & Application Notes:

- Designed specifically to meet the requirements pertaining to the MIL-STD 883/Test Method 5011 for military hybrids.
- 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/>

**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: 150°C/1 hour; \* denotes test on lot acceptance basis)

Physical Properties:	
*Color: Silver	Weight Loss:
*Consistency: Smooth flowing paste	*@ 200°C: 0.13 %
*Viscosity (@ 10 RPM/23°C): 22,000 – 26,000 cPs	@ 250°C: 0.41 %
Thixotropic Index: 3.62	@ 300°C: 0.80 %
*Glass Transition Temp.(Tg): ≥ 90°C (Dynamic Cure 20—200°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: 52 x 10 <sup>-6</sup> in/in/°C	Intermittent: - 55°C to 300°C
Above Tg: 148 x 10 <sup>-6</sup> in/in/°C	Storage Modulus @ 23°C: 727,680 psi
Shore D Hardness: 80	*Ions: Cl <sup>-</sup> < 200 ppm
Lap Shear Strength @ 23°C: 1,880 psi	Na <sup>+</sup> < 50 ppm
*Die Shear Strength @ 23°C: ≥ 10 Kg / 3,400 psi	NH <sub>4</sub> <sup>+</sup> 65 ppm
Degradation Temp. (TGA): 358°C	K <sup>+</sup> < 50 ppm
	*Particle Size: ≤ 20 Microns
Electrical Properties:	
*Volume Resistivity @ 23°C: ≤ 0.0005 Ohm-cm	
Thermal Properties:	
Thermal Conductivity: 1.59 W/mK	

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