

Number of Components:	Single	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	N/A	160°C	30 Minutes
Specific Gravity:	2.74	150°C	1 Hour
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 each container (A & B) thoroughly before mixing the two together. \*Please see Applications Note available on our website.

### Product Description:

EPO-TEK<sup>®</sup> EM127 is a single component, heat curable, electrically conductive epoxy adhesive for semiconductor IC and LED die attach applications.

### EPO-TEK<sup>®</sup> EM127 Advantages & Application Notes:

- Shiny silver appearance after cure is cosmetically desired in the LED industry.
- One component chemistry provides ease of use and long pot life.
- Low viscosity and high thixotropy ideal for high speed dotting and stamping processes.
- High strength after MSL 1 moisture test.
- Moderate Tg provides a robust and strong chemistry for small sized LEDs < 13 mil x 13 mil
- Suggested Applications:
  - o Semiconductor: die attach onto lead-frames
  - o Electronics:
    - Electrically conductive adhesive (“ECA”)for PCB and level 3&4 connections to SMDs, discrete components and connectors.
    - Automotive proven ECA and COB die-attach epoxy.
  - o Optics: LED die attach, ECA for LED and fiber optic industry

**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: varies as required ; \* denotes test on lot acceptance basis)

Physical Properties:	
*Color: Silver	Die Shear Strength @ 23°C: ≥ 10 Kg / 3,400 psi
*Consistency: Smooth thixotropic paste	Degradation Temp. (TGA): 380°C
*Viscosity (@ 100 RPM/23°C): 2,500 – 3,300 cPs	Weight Loss:
Thixotropic Index: 5.5	@ 200°C: 0.22%
*Glass Transition Temp.(Tg): ≥ 65°C (Dynamic Cure	@ 250°C:
20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	@ 300°C: 0.65%
Coefficient of Thermal Expansion (CTE):	Operating Temp:
Below Tg: 28 x 10 <sup>-6</sup> in/in/°C	Continuous: - 55°C to 200°C
Above Tg: 117 x 10 <sup>-6</sup> in/in/°C	Intermittent: - 55°C to 300°C
Shore D Hardness: 85	Storage Modulus @ 23°C: 677,398 psi
Lap Shear Strength @ 23°C: psi	*Particle Size: ≤ 20 Microns
Electrical Properties:	
*Volume Resistivity @ 23°C: ≤0.0009 Ohm-cm	
Thermal Properties:	
Thermal Conductivity: 1.2 W/mK	

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