

Ladd Catalog Number: LEE129-4

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EPO-TEK[®] EE129-4

Technical Data Sheet

For Reference Only
Electrically Conductive Epoxy

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	1:1	100°C	15 Minutes
Specific Gravity:		80°C	1 Hour
Part A	2.95	70°C	2 Hours
Part B	3.62	23°C	24 Hours
Pot Life:	3 Hours		
Shelf Life:	One year at room temperature		

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[®] EE129-4 is a room temperature cure, silver-filled epoxy, designed for making electrical connections in circuit assembly, semiconductor, and LCD applications.

EPO-TEK[®] EE129-4 Advantages & Application Notes:

- Low temperature cures capable from 23°C to 80°C. This allows for lower cost plastics such as those found in flex circuits or medical devices.
- Suggested for cryogenic cooling applications.
- Works well for aerospace hybrid circuits and ITO electrodes in LCD packaging and assembly.
- Reasonable pot life of 3 hours allows for mass production.
- Smooth thixotropic paste allows for application by automatic dispensing equipment. It can also be applied by hand, spatula, or screen printing.
- Works well with surfaces like Au, Ag-Pd, Cu, brass, Kovar, stainless steel; as well as ceramic, PCB, solder masks, most plastics and glasses.
- 1:1 mix ratio permits varied packing opportunities such as “bi-pax” and static mixing.

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: Part A: Silver Part B: Silver
*Consistency: Smooth, Thixotropic Paste
*Viscosity (@ 100 RPM/23°C): 2,000 - 4,000 cPs
Thixotropic Index: 4.6
*Glass Transition Temp.(Tg): ≥ 30 °C (Dynamic Cure
20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)
Coefficient of Thermal Expansion (CTE):
 Below Tg: 30 x 10⁻⁶ in/in/°C
 Above Tg: 227 x 10⁻⁶ in/in/°C
Shore D Hardness: 63
Lap Shear Strength @ 23°C: 1,110 psi
Die Shear Strength @ 23°C: ≥ 5 Kg / 1,700 psi
Degradation Temp. (TGA): 303°C

Weight Loss:

@ 200°C: 0.18%
@ 250°C: 0.54%
@ 300°C: 2.06%

Operating Temp:

Continuous: - 55°C to 150°C
Intermittent: - 55°C to 250°C

Storage Modulus @ 23°C: 156,318 psi

Ions: Cl⁻ 223 ppm
Na⁺ 26 ppm
NH₄⁺ 22 ppm
K⁺ 12 ppm

*Particle Size: ≤ 45 Microns

Electrical Properties:

Volume Resistivity @ 23°C (23°C/24 hour cure): 0.01Ohm-cm

Thermal Properties:

Thermal Conductivity: 1.60 W/mK

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