

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

### EPO-TEK<sup>®</sup> 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	Weight Loss:
*Consistency: Smooth, Thixotropic Paste	@ 200°C: 0.18%
*Viscosity (@ 100 RPM/23°C): 2,000 - 4,000 cPs	@ 250°C: 0.54%
Thixotropic Index: 4.6	@ 300°C: 2.06%
*Glass Transition Temp.(Tg): ≥ 30 °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 150°C
Below Tg: 30 x 10 <sup>-6</sup> in/in/°C	Intermittent: - 55°C to 250°C
Above Tg: 227 x 10 <sup>-6</sup> in/in/°C	Storage Modulus @ 23°C: 156,318 psi
Shore D Hardness: 63	Ions: Cl <sup>-</sup> 223 ppm
Lap Shear Strength @ 23°C: 1,110 psi	Na <sup>+</sup> 26 ppm
Die Shear Strength @ 23°C: ≥ 5 Kg / 1,700 psi	NH <sub>4</sub> <sup>+</sup> 22 ppm
Degradation Temp. (TGA): 303°C	K <sup>+</sup> 12 ppm
	*Particle Size: ≤ 45 Microns
Electrical Properties:	
*Volume Resistivity @ 23°C: ≤ 0.0003 Ohm-cm	Volume Resistivity @ 23°C (23°C/24 hour cure): 0.01Ohm-cm
Thermal Properties:	
Thermal Conductivity: 1.60 W/mK	

Polytec PT GmbH Polymere Technologien  
Polytec-Platz 1-7 76337 Waldbronn Tel.: 07243 604 400 E-Mail: info@polytec-pt.de  
[www.polytec-pt.de](http://www.polytec-pt.de)

*Epoxies and Adhesives for Demanding Applications™*

**This information is based on data and tests believed to be accurate. Epoxy Technology, Inc. makes no warranties (expressed or implied) as to its accuracy and assumes no liability in connection with any use of this product.**

**Zur Beachtung:**

Vorstehende Angaben können nur allgemeine Hinweise sein. Bei den aufgeführten Eigenschaften und Leistungsmerkmalen handelt es sich um circa-Werte, diese sind nicht Teil der Produktspezifikation. Wegen der außerhalb unseres Einflusses liegenden Verarbeitungs- und Anwendungsbedingungen und der Vielzahl unterschiedlicher Materialien empfehlen wir, in jedem Fall zunächst ausreichende Eigenversuche durchzuführen. Eine Haftung für konkrete Anwendungsergebnisse kann daher aus den Angaben und Hinweisen in diesem Merkblatt nicht abgeleitet werden.

Mit Erscheinen dieser Ausgabe verlieren alle vorhergehenden technischen Merkblätter Ihre Gültigkeit. Sicherheitsrelevante Daten können dem Sicherheitsdatenblatt entnommen werden.

**Änderungen vorbehalten / Stand: 09/2009**