

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	10:3	80°C	2 Hours
Specific Gravity:		23°C	2 Days
Part A	1.34		
Part B	1.08		
Pot Life:	2 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> T7109-17 is a flexible, thermally conductive, electrically insulating epoxy paste designed for low stress and heat dissipation applications within the semiconductor, hybrid, electronic and optical industries. It is a replacement for EPO-TEK<sup>®</sup> T7109-14.

### EPO-TEK<sup>®</sup> T7109-17 Advantages & Application Notes:

- Suggested applications:
  - Hybrids: bonding thermo-electric coolers (TEC's)
  - Power devices: adhesive for low-stress bonding of ferrites; laminating Cu foils to substrates
  - Optics:
    - Die-attaching  $\mu$ -LCDs to PCB/substrate
    - Flexible potting of kapton flex PCB containing  $\mu$ -LCD into the frame
    - Adhesive for OEM optics including profilometry
  - Semiconductor: glob top over IC and wire bonds
  - General: adhesive for Al, Cu, Kovar, ceramic, glass, PCBs, and most plastics
- Rheology allows deposition by hand, dispensers or screen printers.
- Alternative products exist. Contact [techserv@epotek.com](mailto:techserv@epotek.com) for your best recommendation.

**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: 80°C/2 hours \* denotes test on lot acceptance basis)

Physical Properties:	
*Color: Part A: Grey Part B: Clear/Colorless	Die Shear Strength @ 23°C: $\geq 2.8$ Kg / 952 psi
*Consistency: Smooth paste	Degradation Temp. (TGA): 317°C
*Viscosity (@ 5 RPM/23°C): 30,000 – 70,000 cPs	Weight Loss:
Thixotropic Index: 2.3	@ 200°C: 0.67%
*Glass Transition Temp.(Tg): $\leq 20^\circ\text{C}$ (Dynamic Cure 20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	@ 250°C: 1.15%
Coefficient of Thermal Expansion (CTE):	@ 300°C: 3.14%
Below Tg: $48 \times 10^{-6}$ in/in/°C	Operating Temp:
Above Tg: $181 \times 10^{-6}$ in/in/°C	Continuous: - 55°C to 150°C
Shore A Hardness: 83	Intermittent: - 55°C to 250°C
Lap Shear Strength @ 23°C: 574 psi	Storage Modulus @ 23°C: 2,600 psi
	*Particle Size: $\leq 20$ Microns
Thermal Properties:	
Thermal Conductivity: 0.50 W/mK	
Electrical Properties:	
Dielectric Constant (1KHz): 6.10	Volume Resistivity @ 23°C: $\geq 0.01 \times 10^{12}$ Ohm-cm
Dissipation Factor (1KHz): 0.146	

### EPOXY TECHNOLOGY, INC.

14 Fortune Drive, Billerica, MA 01821-3972 Phone: 978.667.3805 Fax: 978.663.9782

[www.EPOTEK.com](http://www.EPOTEK.com)

*Epoxy 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.**