

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	10:1	150°C	15 Minutes
Specific Gravity:		100°C	1 Hour
Part A	3.99	80°C	3 Hours
Part B	0.99	23°C	3 Days
Pot Life:	5 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[®] EP110-R1 is a silver-filled epoxy which is similar to EPO-TEK[®] E4110, designed for potting and casting applications.

EPO-TEK[®] EP110-R1 Advantages & Application Notes:

- Ease of use: smooth flowing paste allows for automated dispensing, stamping, brushing, or hand applications. In some cases, the low viscosity nature of the paste allows it to be sprayed onto targets.
- Suggested applications include: EMI and Rf shielding, ITO interconnects in LCDs, low temperature cryogenic cooling.
- Exhibits superior adhesion to a wide variety of substrates including most metals, ceramics, glass and plastics.
- Hybrid / Micro-electronic adhesive including die-attach and substrate attach for Rf and Microwave devices.
- Bright and shiny silver epoxy; provides a metallic-like layer after cure.

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: Part A: Silver Part B: Clear/Colorless	Weight Loss:
*Consistency: Smooth Flowing Paste	@ 200°C: 0.25%
*Viscosity (@ 100 RPM/23°C): 500 – 1,000 cPs	@ 250°C: 0.35%
Thixotropic Index: 1.6	@ 300°C: 0.77%
*Glass Transition Temp.(Tg): ≥ 40°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: 29 x 10 ⁻⁶ in/in/°C	Intermittent: - 55°C to 250°C
Above Tg: 127 x 10 ⁻⁶ in/in/°C	Storage Modulus @ 23°C: 1,594,255 psi
Shore D Hardness: 50	Ions: Cl ⁻ 224 ppm
Lap Shear Strength @ 23°C: 1,800 psi	Na ⁺ 23 ppm
Die Shear Strength @ 23°C: ≥ 10 Kg / 3,400 psi	NH ₄ ⁺ 23 ppm
Degradation Temp. (TGA): 403°C	K ⁺ 3 ppm
	*Particle Size: ≤ 45 Microns
Electrical Properties:	
*Volume Resistivity @ 23°C: ≤ 0.0004 Ohm-cm	*Volume Resistivity @ 23°C (23°C/3 Day cure): ≤ 0.05 Ohm-cm
Thermal Properties:	
Thermal Conductivity: 1.73 W/mK	

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