

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	100:68	60°C	2 Hours
Specific Gravity:		23°C	1 Day
Part A	1.16		
Part B	1.01		
Pot Life:	20 Minutes		
Shelf Life:	One year at room temperature		

Note: Container(s) should be kept closed when not in use. *Please see Applications Note available on our website.
- TOTAL MASS SHOULD NOT EXCEED 25 GRAMS -

Product Description:

EPO-TEK[®] 509FM-1 is a two component, optically opaque epoxy designed for potting of semiconductors, PCB and systems-level electronics. It can be used in many electronic industries such as consumer, military, medical and optical/OEM.

EPO-TEK[®] 509FM-1 Advantages & Application Notes:

- Low viscosity resin allows for ease of pouring and potting into cavities with minimal void formation.
- Special care should be used when mixing large masses. Contact techserv@epotek.com for advice on mixing and potting procedures
- Opaque black while maintaining its high insulation properties
- Also, available in a thixotropic version called EPO-TEK[®] 509EBT-M1. Contact techserv@epotek.com to determine which is best option for given application
- Compatible with dispensing, pouring and spin coating applications
- Suggested Applications:
 - Optics: cutting of IR and VIS light in range of 300 to 2000 nm.
 - Electronics; potting cables and wires into connectors, electrically isolating pins of connectors
 - Semiconductor: a glob top over IC's using the COB packaging format

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: 60 °C/2 Hours; * denotes test on lot acceptance basis)*

Physical Properties:	
*Color: Part A: Black Part B: Amber	Die Shear Strength @ 23°C: ≥ 10 Kg / 3,400 psi
*Consistency: Pourable liquid	Degradation Temp. (TGA): 365°C
*Viscosity (@ 100 RPM/23°C): 400 – 1,000 cPs	Weight Loss:
Thixotropic Index: N/A	@ 200°C: 0.29%
*Glass Transition Temp.(Tg): ≥ 40°C (Dynamic Cure	@ 250°C: 1.14%
20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	@ 300°C: 3.47%
Coefficient of Thermal Expansion (CTE):	Operating Temp:
Below Tg: 55 x 10 ⁻⁶ in/in/°C	Continuous: - 55°C to 200°C
Above Tg: 191 x 10 ⁻⁶ in/in/°C	Intermittent: - 55°C to 300°C
Shore D Hardness: 85	Storage Modulus @ 23°C: 327,932 psi
Lap Shear Strength @ 23°C: 1,704 psi	*Particle Size: N/A
Optical Properties @ 23°C:	
Index of Refraction @ 23°C: N/A	Spectral Transmission @ 23°C: < 5 % @ 400-2500 nm
Electrical & Thermal Properties:	
Thermal Conductivity: N/A	Volume Resistivity @ 23°C: ≤ 3 x 10 ¹³ Ohm-cm
Dielectric Constant (1KHz): 3.65	Dissipation Factor (1KHz): 0.007

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