

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	100:4.5	150°C	5 Minutes
Specific Gravity:		120°C	10 Minutes
Part A	2.03	100°C	20 Minutes
Part B	1.03	80°C	45 Minutes
Pot Life:	16 Hours		
Shelf Life:	One year at room temperature		

Note: Container(s) should be kept closed when not in use. For filled systems, mix the contents of Part A thoroughly before mixing the two parts together. *Please see Applications Note available on our website.

Product Description:

EPO-TEK[®] H22 is a two component, silver-filled epoxy system designed specifically for die bonding and sealing hybrid circuit packages.

EPO-TEK[®] H22 Advantages & Application Notes:

- A smooth, free flowing, slightly thixotropic paste, using a 100% solids system. It can be dispensed, screen printed, or manually applied.
- High Tg allows it to be used for high temperature applications.
- Outstanding high temperature properties and excellent solvent, chemical and moisture resistance.
- Extended pot life and fast curing at relatively low temperatures < 100°C.
- Designed to be used in the 300°C range for applications such as wire bonding operations and eutectic lid-sealing processes.
- Contains no solvents or thinners. NASA approved, low outgassing epoxy – <http://outgassing.nasa.gov/>
- Can be used instead of eutectic solders for near-hermetic sealing.

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: Amber	Weight Loss:
*Consistency: Smooth flowing paste	@ 200°C: 0.09%
*Viscosity (@ 20 RPM/23°C): 12,000 – 20,000 cPs	@ 250°C: 0.23%
Thixotropic Index: 2.36	@ 300°C: 0.42%
*Glass Transition Temp.(Tg): ≥ 100°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 250°C
Below Tg: 39 x 10 ⁻⁶ in/in/°C	Intermittent: - 55°C to 350°C
Above Tg: 224 x 10 ⁻⁶ in/in/°C	Storage Modulus @ 23°C: 540,120 psi
Shore D Hardness: 80	Ions: Cl ⁻ 175 ppm
Lap Shear Strength @ 23°C: 1,980 psi	Na ⁺ 60 ppm
Die Shear Strength @ 23°C: ≥ 5 Kg / 1,700 psi	NH ₄ ⁺ 148 ppm
Degradation Temp. (TGA): 454°C	K ⁺ 6 ppm
	*Particle Size: ≤ 45 Microns
Electrical Properties:	
*Volume Resistivity @ 23°C: ≤ 0.005 Ohm-cm	
Thermal Properties:	
Thermal Conductivity: 0.94 W/mK	

EPOXY TECHNOLOGY, INC.

14 Fortune Drive, Billerica, MA 01821-3972 Phone: 978.667.3805 Fax: 978.663.9782
www.EPOTEK.com

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