

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		
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. Passes NASA low outgassing standard ASTM E595 with proper cure - <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

Epoxyes 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.