EPOXY TECHNOLOGY

EPO-TEK® H44

Technical Data Sheet

For Reference Only

Gold-Filled, Electrically Conductive Epoxy

Number of Components:	Single	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	N/A	150°C	1 Hour
Specific Gravity:	Upon Request		
Part A			
Part B			
Pot Life:	N/A		
Shelf Life:	Six months at room temperature		

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

Product Description:

EPO-TEK® H44 is a single component, gold-filled, electrically conductive epoxy adhesive designed for hybrid microelectronic packaging.

EPO-TEK® H44 Advantages & Application Notes:

- High viscosity paste. Users should not expect the same creamy viscosity as silver-filled epoxies.
- Design engineers need to be aware of longer lead times and shorter shelf-life than traditional silver-filled epoxies.
- Suggested applications for hybrid/hermetic packaging: Die-attach and SMD attach instead of silver epoxy; avoiding silver migration inside sealed packages; medical and aerospace electronics and circuits.
- Passes NASA low outgassing standard ASTM E595 with proper cure - http://outgassing.nasa.gov/

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:** Brown	**Weight Loss:**
***Consistency:** Smooth thick paste	**@ 200°C:**
***Viscosity (@ 0.5 RPM/23°C):** > 819,200 cPs	**@ 250°C:**
Thixotropic Index: N/A	**@ 300°C:** 0.06%
***Glass Transition Temp.(Tg):** ≥ 100°C (Dynamic Cure 20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	**Operating Temp:** **Continuous:** - 55°C to 200°C; **Intermittent:** - 55°C to 300°C
Coefficient of Thermal Expansion (CTE):	**Storage Modulus @ 23°C:** Upon Request
Below Tg: Upon Request	**Ions:** **Cl^-** Upon Request
Above Tg: Upon Request	**Na^+** Upon Request
Shore D Hardness: Upon Request	**NH_4^+** Upon Request
Lap Shear Strength @ 23°C: Upon Request	**K^+** Upon Request
Die Shear Strength @ 23°C: ≥ 10 Kg / 3,400 psi	***Particle Size:** ≤ 50 Microns
Degradation Temp. (TGA): 388°C	
Electrical Properties:	
***Volume Resistivity @ 23°C:** ≤ 0.0005 Ohm-cm	
Thermal Properties:	
Thermal Conductivity: Upon Request	

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

Epoxies 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.

Rev. VI
Apr 2010