EPOXY TECHNOLOGY

EPO-TEK® H61

Technical Data Sheet
For Reference Only
Thermally Conductive Epoxy

Date:	September 2017
Rev:	VIII
No. of Components:	Single
Mix Ratio by Weight:	N/A
Specific Gravity:	2.40
Pot Life:	25 Days
Shelf Life- Bulk:	Six months at -40°C

Recommended Cure: 150°C / 1 Hour

Minimum Alternative Cure(s):
May not achieve performance properties listed below
150°C / 30 Minutes
120°C / 1 Hour

NOTES:
- Container(s) should be kept closed when not in use.
- Filled systems should be stirred thoroughly before mixing and prior to use.
- Performance properties (rheology, conductivity, others) of the product may vary from those stated on the data sheet when bi-pak/syringe packaging or post-processing of any kind is performed. Epoxy's warranties shall not apply to any products that have been reprocessed or repackaged from Epoxy's delivered status/container into any other containers of any kind, including but not limited to syringes, bi-paks, cartridges, pouches, tubes, capsules, films or other packages.
- Failure to ship frozen may result in viscosity growth beyond the range of values herein; customer assumes all risk.

Product Description: EPO-TEK® H61 is a single component, thermally conductive, electrically insulating, epoxy adhesive for semiconductor, hybrid IC, and electronic circuit assembly applications.

Typical Properties: Cure condition: 150°C / 1 Hour   Different batches, conditions & applications yield differing results. Data below is not guaranteed. To be used as a guide only, not as a specification. * denotes test on lot acceptance basis

PHYSICAL PROPERTIES:				
* Color (before cure):		Grayish white		
* Consistency:		Smooth paste		
* Viscosity (23°C) @ 5 rpm:		40,000-60,000	cPs	
Thixotropic Index:		1.3		
* Glass Transition Temp:		≥ 110	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):				
Below Tg:		17	x 10^{-6} in/in°C	
Above Tg:		95	x 10^{-6} in/in°C	
Shore D Hardness:		89		
Lap Shear @ 23°C:		1,144	psi	
Die Shear @ 23°C:		≥ 20	Kg	7,112 psi
Degradation Temp:		425	°C	
Weight Loss:				
@ 200°C:		0.08	%	
Suggested Operating Temperature:		< 300	°C (Intermittent)	
Storage Modulus:		791,294	psi	
Ion Content:	Cl^-:	41 ppm	Na^+:	140 ppm
	NH_4^+:	354 ppm	K^+:	0 ppm
* Particle Size:		≤ 50	microns	

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	0.7	W/mK
Volume Resistivity @ 23°C:	≥ 2 x 10^{13}	Ohm-cm
Dielectric Constant (1KHz):	4.75	
Dissipation Factor (1KHz):	0.006	

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.
EPOXY TECHNOLOGY, INC.
14 FORTUNE DRIVE, BILLERICA, MA 01821 (978) 667-3805, FAX (978) 663-9782
www.epotek.com

EPO-TEK® H61 Advantages & Suggested Application Notes:

- It is a thixotropic paste and a non-sagging adhesive. It is also useful for deposition methods like dispensing, printing, or hand held processes.
- Suggested applications:
  - Hybrid:
    - Staking SMDs onto the PCB for extra mechanical support; insulation layer between 2 contact pads of caps and resistors.
    - Heat sinking devices on ceramic PCB and PCB to external case; adhesion to Si, Au, kovar, Al-N, BT.
    - Reinforcing and extra mechanical support for wire bond integrity
  - Electronics:
    - Bonding passive devices such as inductor coils, ferrites, motors, connectors, and various SMDs.
    - Adhesion to FR4 and common PCB substrates and housings.
- Available in various viscosity alternatives and black color. Contact techserv@epotek.com for your best recommendation.

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.
EPOXY TECHNOLOGY, INC.
14 FORTUNE DRIVE, BILLERICA, MA 01821 (978) 667-3805, FAX (978) 663-9782
www.epotek.com