EPOXY TECHNOLOGY

EPO-TEK® T7109-17

Technical Data Sheet
For Reference Only
Thermally Conductive Epoxy

Date:	September 2017	
Rev:	VII	
No. of Components:	Two	
Mix Ratio by Weight:	10 : 3	
Specific Gravity:	Part A: 1.34	Part B: 1.08
Pot Life:	2 Hours	
Shelf Life- Bulk:	One year at room temperature	

Recommended Cure: 80°C / 2 Hours

Minimum Alternative Cure(s):
May not achieve performance properties listed below
23°C / 2 Days

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.
- Syringe packaging will impact initial viscosity and effective pot life, potentially beyond stated parameters.

Product Description: EPO-TEK® T7109-17 is a flexible, thermally conductive, electrically insulating epoxy paste designed for low stress and heat dissipation applications within the semiconductor, hybrid, electronic and optical industries. It is a replacement for EPO-TEK® T7109-14.

Typical Properties: Cure condition: 80°C / 2 Hours 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):		Part A: Grey	Part B: Clear/Colorless
* Consistency:		Smooth paste	
* Viscosity (23°C) @ 5 rpm:		30,000-70-000	cPs
Thixotropic Index:		2.3	
* Glass Transition Temp:		≥ 20	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -40-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	48	x 10^{-6} in/in°C
	Above Tg:	181	x 10^{-6} in/in°C
Shore D Hardness:		83	
Lap Shear @ 23°C:		574	psi
Die Shear @ 23°C:		≥ 2.8	Kg 996 psi
Degradation Temp:		317	°C
Weight Loss:			
	@ 200°C:	0.67	%
	@ 250°C:	1.15	%
	@ 300°C:	3.14	%
Suggested Operating Temperature:		< 250	°C (Intermittent)
Storage Modulus:		2,600	psi
* Particle Size:		≤ 20	microns

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	0.5	W/mK
Volume Resistivity @ 23°C:	≥ 0.01 x 10^{12}	Ohm-cm
Dielectric Constant (1KHz):	6.10	
Dissipation Factor (1KHz):	0.146	

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.

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EPO-TEK® T7109-17 Advantages & Suggested Application Notes:

- Suggested applications:
  - Hybrids: bonding thermo-electric coolers (TECs)
  - Power devices: adhesive for low-stress bonding of ferrites; laminating Cu foils to substrates
  - Optics:
    - Die-attaching µ-LCDs to PCB/substrate
    - Flexible potting of kapton flex PCB containing µ-LCD into the frame
    - Adhesive for OEM optics including profilometry
  - Semiconductor: glob top over IC and wire bonds
  - General: adhesive for Al, Cu, Kovar, ceramic, glass, PCBs, and most plastics
- Rheology allows deposition by hand, dispensers or screen printers.
- Alternative products exist. Contact techserv@epotek.com for your best recommendation.

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