EPOXY TECHNOLOGY

EPO-TEK® E3035

Technical Data Sheet
For Reference Only
Electrically Conductive Adhesive

Date:	July 2019
Rev:	VI
No. of Components:	Single
Mix Ratio by Weight:	N/A
Specific Gravity:	3.09
Pot Life:	28 Days
Shelf Life- Bulk:	One year at -40°C
Shelf Life- Syringe:	Six months at -40°C

Recommended Cure: 180°C / 1 Hour

Minimum Alternative Cure(s):
May not achieve performance properties listed below
165°C / 1.5 Hours

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® E3035 is a single component, silver-filled epoxy for hybrid die and component attach.

Typical Properties: Cure condition: 180°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):	Silver			
* Consistency:	Smooth thixotropic paste			
* Viscosity (23°C) @ 10 rpm:		22,000-28,000	cPs	
Thixotropic Index:		4.0		
* Glass Transition Temp:		≥ 100	°C (Dynamic Cure: 25-300°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):				
Below Tg:		31	$x\ 10^{-6}$ in/in°C	
Above Tg:		97	$x\ 10^{-6}$ in/in°C	
Shore D Hardness:		83		
Lap Shear @ 23°C:		> 2,000	psi	
Die Shear @ 23°C:		≥ 10	Kg	3,556 psi
Degradation Temp:		372	°C	
Weight Loss:				
@ 200°C:		0.13	%	
@ 250°C:		0.14	%	
@ 300°C:		0.28	%	
Suggested Operating Temperature:		< 300	°C (Intermittent)	
Storage Modulus:		1,106,623	psi	
Ion Content:	Cl^-:	47 ppm	Na^+:	17 ppm
	NH_4^+:	60 ppm	K^+:	7 ppm
* Particle Size:		≤ 20	microns	

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	1.5	W/mK
* Volume Resistivity @ 23°C:	≤ 0.0005	Ohm-cm
Dielectric Constant (1KHz):	N/A	
Dissipation Factor (1KHz):	N/A	

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® E3035 Advantages & Suggested Application Notes:

- Performs exceptionally well as a die attach for small chips such as GaAs, LEDs and diodes.
- Capable of resisting 260°C green reflow process, low outgassing in hermetic lid-seal processes near 300°C and organic burn-in up to 150°C/1000 hours storage.
- Yields low levels of water extractable monovalent ions such as chlorides.
- Capable of JEDEC Level II die-attach packaging on die-paddles and lead-frames.
- Silver-filled epoxy used for opto-packaging, hybrids, and many types of substrates including kovar, ceramic and BT.

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