

Date: November 2019
Rev: IX
No. of Components: Two
Mix Ratio by Weight: 100 : 5
Specific Gravity: Part A: 1.54 Part B: 1.10
Pot Life: 2.5 Days
Shelf Life- Bulk: One year at -40°C

Recommended Cure: 150°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.

Product Description: EPO-TEK® TJ2139-LH is a two component, electrically insulating epoxy adhesive designed to meet low halogen standards.

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):	Part A: Ivory	Part B: Amber	
* Consistency:	Smooth slightly thixotropic paste		
* Viscosity (23°C) @ 10 rpm:	22,000-34,000	cPs	
Thixotropic Index:	1.8		
* Glass Transition Temp:	≥ 100 °C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)		
Coefficient of Thermal Expansion (CTE):			
Below Tg:	45	x 10 ⁻⁶ in/in°C	
Above Tg:	137	x 10 ⁻⁶ in/in°C	
Shore D Hardness:	85		
Lap Shear @ 23°C:	> 2,000	psi	
Die Shear @ 23°C:	≥ 20	Kg	7,112 psi
Degradation Temp:	419 °C		
Weight Loss:			
@ 200°C:	< 0.05	%	
@ 250°C:	0.19	%	
@ 300°C:	0.43	%	
Suggested Operating Temperature:	< 350 °C (Intermittent)		
Storage Modulus:	610,418	psi	
Ion Content:	Cl:	32 ppm	Na ⁺ : 30 ppm
	NH ₄ ⁺ :	134 ppm	K ⁺ : 10 ppm
* Particle Size:	≤ 20 microns		

ELECTRICAL AND THERMAL PROPERTIES:

Thermal Conductivity:	0.5	W/mK
Volume Resistivity @ 23°C:	≥ 9.57 x 10 ¹³	Ohm-cm
Dielectric Constant (1KHz):	4.05	
Dissipation Factor (1KHz):	0.004	

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.

EPOXY TECHNOLOGY, INC.

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www.epotek.com

EPO-TEK® TJ2139-LH Advantages & Suggested Application Notes:

- Designed for high throughput dispensed die attach applications
- Offers long pot life (2.5 days)
- Meets international low halogen standards
- Applications:
 - ASIC die attach in acoustic microphones for MEMS devices in mobile applications
 - Die attach in medical grade hearing aids
 - Packaging and encapsulation in watch manufacturing

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