



## Product Information Sheet

### EPO-TEK® TJ2139-LH Black

**Date:** July 2019  
**Rev:** V  
**No. of Components:** Two  
**Mix Ratio by Weight:** 100 : 5  
**Specific Gravity:** Part A: 1.67      Part B: 1.10  
**Pot Life:** 2.5 Days  
**Shelf Life- Bulk:** One year at -40°C  
**Shelf Life- Syringe:** Six months at -40°C

**Recommended Cure: 150°C / 1 Hour**

**Minimum Alternative Cure(s):**  
*May not achieve performance properties listed below*  
 200°C / 5 Minutes  
 180°C / 15 Minutes  
 140°C / 40 Minutes

**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.
- If product crystallizes in storage, place container in warm oven until crystallization disappears. Please refer to Tech Tip #7 on website.

**Product Description:** A two component, low-halogen, electrically insulating die attach adhesive with long pot life.

**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

<b>PHYSICAL PROPERTIES:</b>			
* Color (before cure):	Part A: Black	Part B: Amber	
* Consistency:	Smooth thixotropic paste		
* Viscosity (23°C) @ 10 rpm:	25,000-35,000	cPs	
Thixotropic Index:	1.9		
* 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 <sup>-6</sup> in/in°C	
	Above Tg:	137 x 10 <sup>-6</sup> in/in°C	
Shore D Hardness:	85		
Lap Shear @ 23°C:	> 2,000	psi	
Die Shear @ 23°C:	≥ 30	Kg	10,668 psi
Degradation Temp:	411 °C		
Weight Loss:			
	@ 250°C:	0.07 %	
	@ 300°C:	0.63 %	
Suggested Operating Temperature:	< 350 °C (Intermittent)		
Storage Modulus:	631,753 psi		
* Particle Size:	≤ 20 microns		

<b>ELECTRICAL AND THERMAL PROPERTIES:</b>		
Thermal Conductivity:	0.5	W/mK

<b>OPTICAL PROPERTIES @ 23°C:</b>		
Spectral Transmission:	< 1% @ 300-2150	nm
Refractive Index:	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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