

**Date:** February 2021  
**Rev:** V  
**No. of Components:** Two  
**Mix Ratio by Weight:** 10 : 1  
**Specific Gravity:** Part A: 2.43      Part B: 0.87  
**Pot Life:** 30 Minutes  
**Shelf Life- Bulk:** One year at room temperature  
**Shelf Life- Syringe:** Six months at -40°C

**Recommended Cure: 70°C / 1 Hour**

Minimum Alternative Cure(s):  
*May not achieve performance properties listed below*  
 23°C / 24 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:** A two component, black colored and optically opaque epoxy designed for optical, medical, and opto-electronic packaging of semiconductor devices and components. It is a modification of EPO-TEK® 320 for increased electrical insulation. It is also more viscous and thixotropic. Can be used for adhesion, sealing, potting and encapsulation.

**Typical Properties:** Cure condition: varies as required      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: Black	Part B: Clear/colorless	
* Consistency:	Slightly thixotropic paste		
* Viscosity (23°C) @ 100 rpm:	1,500 - 3,000	cPs	
Thixotropic Index:	3.2		
* Glass Transition Temp:	≥ 50	°C	(Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	20	x 10 <sup>-6</sup> in/in°C
	Above Tg:	82	x 10 <sup>-6</sup> in/in°C
Shore D Hardness:	89		
Lap Shear @ 23°C:	1,573	psi	
Die Shear @ 23°C:	≥ 10	Kg	3,556 psi
Degradation Temp:	340	°C	
Weight Loss:			
	@ 200°C:	0.17	%
	@ 250°C:	0.35	%
	@ 300°C:	0.98	%
Suggested Operating Temperature:	< 275	°C	(Intermittent)
Storage Modulus:	684,864	psi	
* Particle Size:	≤ 20	microns	

ELECTRICAL AND THERMAL PROPERTIES:			
Thermal Conductivity:	N/A		
Volume Resistivity @ 23°C:	≥ 0.1 x 10 <sup>14</sup>	Ohm-cm	
Dielectric Constant (1KHz):	9.75		
Dissipation Factor (1KHz):	0.033		

OPTICAL PROPERTIES @ 23°C:			
Spectral Transmission:	< 1% @ 300-2500	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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