Product Information Sheet

EPO-TEK® 320NC

Date:	September 2017		**Recommended Cure: 70°C / 1 Hour**
Rev:	III		
No. of Components:	Two		Minimum Alternative Cure(s):
Mix Ratio by Weight:	10 : 1		*May not achieve performance properties listed below*
Specific Gravity:	Part A: 2.06	Part B: 0.88	23°C / 24 Hours
Pot Life:	20 Minutes		
Shelf Life- Bulk:	One year at room temperature		

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 insulation and dielectric properties.

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:	Smooth pourable paste	
* Viscosity (23°C) @ 100 rpm:	1,000 - 3,000	cPs
Thixotropic Index:	N/A	
* 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:	28	x 10^{-6} in/in°C
Above Tg:	94	x 10^{-6} in/in°C
Shore D Hardness:	85	
Lap Shear @ 23°C:	> 2,000	psi
Die Shear @ 23°C:	≥ 15	Kg 5,334 psi
Degradation Temp:	340	°C
Weight Loss:		
@ 200°C:	0.39	%
@ 250°C:	0.63	%
@ 300°C:	1.31	%
Suggested Operating Temperature:	< 275	°C (Intermittent)
Storage Modulus:	538,124	psi
* Particle Size:	≤ 20	microns

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	N/A	
Volume Resistivity @ 23°C:	≥ 2 x 10^{11}	Ohm-cm
Dielectric Constant (1KHz):	9.92	
Dissipation Factor (1KHz):	0.067	

OPTICAL PROPERTIES @ 23°C:		
Spectral Transmission:	< 1% @ 300-2500	nm
Refractive Index:	N/A	

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