**Product Information Sheet**

**EPO-TEK® 320NC-2**

Date: September 2017

Recommended Cure: 70°C / 1 Hour

Revision: III

No. of Components: Two

Minimum Alternative Cure(s):

- May not achieve performance properties listed below

Mix Ratio by Weight: 10 : 1

- 23°C / 24 Hours

Specific Gravity: Part A: 2.43 Part B: 0.87

Pot Life: 30 Minutes

Shelf Life - Bulk: One year at room temperature

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**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 (theology, 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

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**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 10⁻⁶ in/in°C
  - Above Tg: 82 x 10⁻⁶ 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 10¹⁴ Ohm-cm
- Dielectric Constant (1KHz): 9.75
- Dissipation Factor (1KHz): 0.033

**OPTICAL PROPERTIES **

- Spectral Transmission: < 1% @ 300-2500 nm
- Refractive Index: N/A