Product Information Sheet
EPO-TEK® 320NC

Date: September 2017
Rev: III
No. of Components: Two
Mix Ratio by Weight: 10 : 1
Specific Gravity: Part A: 2.06 Part B: 0.88
Pot Life: 20 Minutes
Shelf Life-Bulk: One year at room temperature

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 (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 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

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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