



**Manufacturer:**  
Epoxy Technology

**Product Name:**  
EPO-TEK® 353ND High Temperature Black Epoxy, Heat Cure- Pre-Mixed and Frozen (3cc Syringe)

**Manufacturer Part Number:**  
ET353NDBLK-3CC



▶ Click here for more details on the EPO-TEK® 353ND High Temperature Black Epoxy, Heat Cure- Pre-Mixed and Frozen (3cc Syringe)



**EPO-TEK® 353ND Black**  
Technical Data Sheet  
For Reference Only  
High Temperature Epoxy

**Date:** February 2022  
**Rev:** XII  
**No. of Components:** Two  
**Mix Ratio by Weight:** 10 : 1  
**Specific Gravity:** Part A: 1.22 Part B: 1.02  
**Pot Life:** < 2 Hours  
**Shelf Life- Bulk:** One year at room temperature  
**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*  
150°C / 1 Minute  
120°C / 5 Minutes  
100°C / 10 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.
- Syringe packaging will impact initial viscosity and effective pot life, potentially beyond stated parameters.
- **TOTAL MASS SHOULD NOT EXCEED 25 GRAMS**
- Black color is cosmetic only, and not intended to be photonic, spectral, or lampblack. All users need to confirm its opacity versus wavelength.

**Product Description:** EPO-TEK® 353ND Black is a two component, high temperature epoxy designed for semiconductor, hybrid, fiber optic, and medical applications.

**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

PHYSICAL PROPERTIES:			
* Color (before cure):	Part A: Black	Part B: Amber	
* Consistency:	Pourable liquid		
* Viscosity (23°C) @ 50 rpm:	3,000 - 5,000	cPs	
Thixotropic Index:	N/A		
* Glass Transition Temp:	≥ 90	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):			
Below Tg:		54	x 10 <sup>-6</sup> in/in°C
Above Tg:		206	x 10 <sup>-6</sup> 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:	420	°C	
Weight Loss:			
@ 200°C:	0.92	%	
@ 250°C:	1.24	%	
@ 300°C:	1.83	%	
Suggested Operating Temperature:	< 325	°C (Intermittent)	
Storage Modulus:	516,912	psi	
Ion Content:	Cl <sup>-</sup> : 595 ppm	Na <sup>+</sup> :	52 ppm
	NH <sub>4</sub> <sup>+</sup> : 1149 ppm	K <sup>+</sup> :	16 ppm
Particle Size:	N/A		
ELECTRICAL AND THERMAL PROPERTIES:			
Thermal Conductivity:	N/A		
Volume Resistivity @ 23°C:	≥ 1.6 x 10 <sup>13</sup>	Ohm-cm	
Dielectric Constant (1KHz):	3.09		
Dissipation Factor (1KHz):	0.005		
OPTICAL PROPERTIES @ 23°C:			
Spectral Transmission:	< 3 % @ 1500 nm		

Epoxyes and Adhesives for Demanding Applications™

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Contact the professionals at Fiber Optic Center for a quote or to get more details.

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Product specifications and data are subject to change without notice. FOC last update 1/29/2026.



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Refractive Index: N/A

### EPO-TEK® 353ND Black Advantages & Suggested Application Notes:

- EPO-TEK® 353ND Black has been color-coded black for optical applications requiring opacity against light in IR and VIS region.
- Reasonable pot-life that allows for low temperature curing to be realized.
- Semiconductor suggested applications: wafer-wafer bonding of CSP, fabrication of MEMs devices, flip chip underfill.
- Hybrid suggested applications: providing near hermetic seals in sensor devices, resisting high temperature packaging.
- Fiber optic adhesive designed to meet Telecordia 1221 - suggested applications:
  - Sealing fiber into ferrules, transmitting light in the optical pathway from 800- 1550 nm range.
  - Fiber component packaging; adhesive for active alignment of optics, environmental seal of opto-package, V-groove arrays.
  - Down-Hole petrochemical fiber optic sensors, resisting >200 C field conditions
- Electronics Assembly suggested applications:
  - Used as dielectric layer in the fabrication of capacitors; laminating PZT ferroelectrics found in ultrasound or ink-jetting devices.
  - Impregnating and insulating copper coil windings in motors and inductor coils. Bonding ferrite cores and magnets.
  - Structural grade epoxy found in hard-disk drive devices; bonding of SST metals, kapton, and magnets.

Epoxies and Adhesives for Demanding Applications™

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