

Date: June 2022
Rev: XIV
No. of Components: Two
Mix Ratio by Weight: 10 : 1
Specific Gravity: Part A: 1.12 Part B: 1.02
Pot Life: 3 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.
- 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-T Black is a two component, high temperature, thixotropic epoxy for fiber optic, PCB and various 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:	Smooth thixotropic paste		
* Viscosity (23°C) @ 20 rpm:	9,000 - 15,000	cPs	
Thixotropic Index:	3.8		
* 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:	43	x 10 ⁻⁶	in/in°C
Above Tg:	231	x 10 ⁻⁶	in/in°C
Shore D Hardness:	80		
Lap Shear @ 23°C:	> 2,000	psi	
Die Shear @ 23°C:	≥ 15	Kg	5,334 psi
Degradation Temp:	409	°C	
Weight Loss:			
@ 200°C:	0.53	%	
@ 250°C:	1.22	%	
@ 300°C:	2.37	%	
Suggested Operating Temperature:	< 325	°C	(Intermittent)
Storage Modulus:	559,120	psi	
* Particle Size:	≤ 20	microns	

ELECTRICAL AND THERMAL PROPERTIES:			
Thermal Conductivity:	N/A		
Volume Resistivity @ 23°C:	≥ 4 x 10 ¹²	Ohm-cm	
Dielectric Constant (1KHz):	3.21		
Dissipation Factor (1KHz):	0.003		

OPTICAL PROPERTIES @ 23°C:			
Spectral Transmission:	< 5 % @ 300-1460	nm	
	< 7 % @ 1550	nm	
Refractive Index:	N/A		

Epoxyes and Adhesives for Demanding Applications™

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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www.epotek.com

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

- This product is a color-coded, black and opaque version of the industry standard EPO-TEK® 353ND-T epoxy adhesive
- Suggested Applications:
 - Semiconductor, glob top DAM around IC's, using COB or DCA packaging formats
 - Electronics Assembly:
 - Insulating adhesive for bonding stainless steel metals, ceramics and carbon composites used in ink-jetting heads
 - Insulating and plugging wires and feed-through cables of automotive circuits
 - Hard Disk Drive – thixotropic staking and termination of Al and Cu coils
 - Adhesive for brushless motors and Cu coil windings
 - Optical:
 - Fiber optic component packaging: bonding fibers, active optics, metals, ceramics and plastic
- Available in alternative viscosities and color. Contact techserv@epotek.com for your best recommendation

Epoxy Technology Epoxies and Adhesives for Demanding Applications™

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