

Date: September 2017
Rev: VII
No. of Components: Two
Mix Ratio by Weight: 10 : 1
Specific Gravity: Part A: 1.23 Part B: 1.02
Pot Life: < 2 Hours
Shelf Life- Bulk: Six months at room temperature

Recommended Cure: 150°C / 1 Hour

Minimum Alternative Cure(s):
May not achieve performance properties listed below
 150°C / 15 Minutes
 120°C / 30 Minutes
 100°C / 90 Minutes
 80°C / 3 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 (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**

Product Description: EPO-TEK® 353ND-4 is a two component, high Tg epoxy designed for fiber optic applications, medical, and hybrid packaging.

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: Clear Yellow	Part B: Amber	
* Consistency:	Viscous liquid		
* Viscosity (23°C) @ 5 rpm:	36,000-66,000	cPs	
Thixotropic Index:	N/A		
* Glass Transition Temp:	≥ 125	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	48	x 10 ⁻⁶ in/in°C
	Above Tg:	186	x 10 ⁻⁶ in/in°C
Shore D Hardness:	87		
Lap Shear @ 23°C:	1,472	psi	
Die Shear @ 23°C:	≥ 15	Kg	5,334 psi
Degradation Temp:	395	°C	
Weight Loss:			
	@ 200°C:	0.52	%
	@ 300°C:	1.29	%
Suggested Operating Temperature:	< 300	°C (Intermittent)	
Storage Modulus:	191,740	psi	
* Particle Size:	N/A		

ELECTRICAL AND THERMAL PROPERTIES:			
Thermal Conductivity:	N/A		
Volume Resistivity @ 23°C:	≥ 1.7 x 10 ¹³	Ohm-cm	
Dielectric Constant (1KHz):	3.85		
Dissipation Factor (1KHz):	0.0103		

OPTICAL PROPERTIES @ 23°C:			
Spectral Transmission:	> 97% @ 900	nm	
	> 96% @ 800	nm	
	> 88% @ 700	nm	
Refractive Index (uncured):	1.5901 @ 589	nm	

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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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EPO-TEK® 353ND-4 Advantages & Suggested Application Notes:

- This epoxy may be considered a higher Tg version of EPO-TEK® 353ND. Higher Tg may allow for better autoclave resistance.
- Lower modulus version of EPO-TEK® 353ND.
- Amber color change upon cure for quick and easy visual identification.
- Suggested for fiber optic application:
 - Fiber optic termination into ferrules such as glass, ceramic, LCP, kovar, silicon, quartz, stainless steel.
 - Fiber seal into feed through boot of package.
 - Mounting optics inside hermetic package.