



### **Manufacturer:**

**Epoxy Technology** 

### **Product Name:**

EPO-TEK® 383ND High Temperature Epoxy, Heat Cure (2.5g)

#### **Manufacturer Part Number:**

ET383ND-2.5G

Click here for more details on the EPO-TEK® 383ND High Temperature Epoxy, Heat Cure (2.5g)



# EPO-TEK® 383ND

**Technical Data Sheet** For Reference Only High Temperature Epoxy

Date: February 2022 Rev: No. of Components:

Two 10:1

Part A: 1.20 Part B: 0.99 8 Hours

Pot Life: Shelf Life- Bulk: One year at room temperature

Shelf Life- Syringe: One year at -40°C Recommended Cure: 150°C / 1 Hour

Minimum Alternative Cure(s):

May not achieve performance properties listed below

90°C / 30 Minutes

#### NOTES:

Mix Ratio by Weight:

Specific Gravity:

- 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
- Syringe packaging will impact initial viscosity and effective pot life, potentially beyond stated parameters

Product Description: EPO-TEK® 383ND is a two component, high temperature, electrically and thermally insulating epoxy. Designed as a longer pot life version of EPO-TEK® 353ND.

<u>Typical Properties:</u> 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

* Consistency:	PHYSICAL PROPERTIES:		
* Viscosity (23°C) @ 50 rpm: 3,500 - 6,000 cPs  Thixotropic Index: N/A  * Glass Transition Temp: ≥ 100 °C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)  Coefficient of Thermal Expansion (CTE):  Below Tg: Above Tg: 34 x 10-6 in/in°C  Above Tg: 129 x 10-6 in/in°C  Shore D Hardness: 88  Lap Shear @ 23°C: > 2,000 psi  Die Shear @ 23°C: > 200 Kg 7,112 psi  Degradation Temp: 415 °C  Weight Loss:  @ 200°C: @ 250°C: 0.28 % @ 250°C: 0.42 % @ 300°C: 0.86 %  Suggested Operating Temperature: Storage Modulus: 369,039  psi	* Color (before cure):	Part A: Clear	Part B: Slightly yellow
Thixotropic Index:  * Glass Transition Temp:  Coefficient of Thermal Expansion (CTE):  Below Tg: Above Tg: 129 x 10- <sup>6</sup> in/in°C  Above Tg:  88 Lap Shear @ 23°C: Die Shear @ 23°C: Degradation Temp:  (@ 200°C: (@ 250°C: (@ 300°C: (@ 300°C: (D 300°	* Consistency:	Pourable liqu	id
* Glass Transition Temp: ≥ 100 °C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)  Coefficient of Thermal Expansion (CTE):  Below Tg: 34 x 10-6 in/in°C  Above Tg: 129 x 10-6 in/in°C  Shore D Hardness: 88  Lap Shear @ 23°C: > 2,000 psi  Die Shear @ 23°C: ≥ 20 Kg 7,112 psi  Degradation Temp: 415 °C  Weight Loss: @ 200°C: 0.28 %  @ 250°C: 0.42 %  @ 300°C: 0.86 %  Suggested Operating Temperature: < 350 °C (Intermittent)  Storage Modulus: 369,039 psi	* Viscosity (23°C) @ 50 rpm:	3,500 - 6,0	00 cPs
Coefficient of Thermal Expansion (CTE):         Below Tg:       34       x 10-6 in/in °C         Above Tg:       129       x 10-6 in/in °C         Shore D Hardness:       88         Lap Shear @ 23°C:       > 2,000       psi         Die Shear @ 23°C:       ≥ 20       Kg       7,112 psi         Degradation Temp:       415       °C         Weight Loss:         @ 200°C:       0.28       %         @ 250°C:       0.42       %         Suggested Operating Temperature:       < 350	Thixotropic Index:	N	/A
Below Tg:     34     x 10-® in/in°C       Above Tg:     129     x 10-® in/in°C       Shore D Hardness:     88       Lap Shear @ 23°C:     > 2,000     psi       Die Shear @ 23°C:     ≥ 20     Kg     7,112 psi       Degradation Temp:     415 °C     C       Weight Loss:     @ 200°C:     0.28     %       @ 250°C:     0.42     %       @ 300°C:     0.86     %       Suggested Operating Temperature:     < 350	* Glass Transition Temp:	≥ 1	OO °C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Above Tg: 129 x 10-6 in/in°C  Shore D Hardness: Lap Shear @ 23°C: > 2,000 psi  Die Shear @ 23°C: ≥ 20 Kg 7,112 psi  Degradation Temp: 415 °C  Weight Loss:	Coefficient of Thermal Expansion (C		
Shore D Hardness:       88         Lap Shear @ 23°C:       > 2,000       psi         Die Shear @ 23°C:       ≥ 20       Kg       7,112 psi         Degradation Temp:       415       °C         Weight Loss:         @ 200°C:       0.28       %         @ 250°C:       0.42       %         0 300°C:       0.86       %         Suggested Operating Temperature:       < 350	Belov	w Tg:	34 x 10 <sup>-6</sup> in/in°C
Lap Shear @ 23°C:       > 2,000       psi         Die Shear @ 23°C:       ≥ 20       Kg       7,112 psi         Degradation Temp:       415       °C         Weight Loss:         @ 200°C:       0.28       %         @ 250°C:       0.42       %         @ 300°C:       0.86       %         Suggested Operating Temperature:       < 350	Abov	e Tg: 1	29 x 10 <sup>-6</sup> in/in°C
Die Shear @ 23°C:       ≥ 20 kg       7,112 psi         Degradation Temp:       415 °C         Weight Loss:         @ 200°C:       0.28 %         @ 250°C:       0.42 %         @ 300°C:       0.86 %         Suggested Operating Temperature:       < 350 °C (Intermittent)	Shore D Hardness:		38
Degradation Temp:       415       °C         Weight Loss:       @ 200°C:       0.28       %         @ 250°C:       0.42       %         @ 300°C:       0.86       %         Suggested Operating Temperature:       < 350		> 2,0	00 psi
Weight Loss:	Die Shear @ 23°C:	≥	20 Kg 7,112 psi
@ 200°C: 0.28 % @ 250°C: 0.42 % @ 300°C: 0.86 %  Suggested Operating Temperature: < 350 °C (Intermittent) Storage Modulus: 369,039 psi	Degradation Temp:	4	15 °C
© 250°C: 0.42 % © 300°C: 0.86 %  Suggested Operating Temperature: 350 °C (Intermittent) Storage Modulus: 369,039 psi	Weight Loss:		
© 300°C: 0.86 % Suggested Operating Temperature: < 350 °C (Intermittent) Storage Modulus: 369,039 psi	@ 20	00°C: 0.	28 %
Suggested Operating Temperature: < 350 °C (Intermittent) Storage Modulus: 369,039 psi			:= ::
Storage Modulus: 369,039 psi	@ 30	00°C: 0.	36 %
		< 3	50 °C (Intermittent)
		, .	
* Particle Size: ≤ 20 microns	* Particle Size:	≤	20 microns

ELECTRICAL AND THERMAL PROPERTIES	S:	
Thermal Conductivity:	N/A	
Volume Resistivity @ 23°C:	$\geq 3 \times 10^{13}$	Ohm-cm
Dielectric Constant (1KHz):	2.59	
Dissipation Factor (1KHz):	0.008	

<b>OPTICAL PROPERTIES @ 23°C</b>	:	
Spectral Transmission:	≥ 90% @ 520-1660	nm
Refractive Index:	1.5715 @ 589	nm

Epoxies 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.

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





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# **EPO-TEK® 383ND**

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## EPO-TEK® 383ND Advantages & Suggested Application Notes:

- · Built in color change from clear to dark amber when cured properly.
- Long 8 hour pot life allows for use over an entire shift.
- Capable of high performance in fiber optic applications; designed to meet Telecordia 1221.
- Strong transmission in the near IR; optimal for sealing fiber to ferrules, transmitting light in the optical pathways from 800-1,500 nm.
- Commonly used for fiber component packaging such as alignment of optics, environmental sealing of opto-electronic packages and V-groove arrays.
- Used for pot fiber optic bundles into ferrules for light guides and endoscopes.
- Used as dielectric layer in fabrication of capacitors and laminating PZT piezoelectrics such as those found in ink-jetting devices.
- Structural grade epoxy found in hard disk drives. Applications include anti-disk and voice coil sealing.
- Low viscosity allows for wicking and capillary dispensing.

Epoxies and Adhesives for Demanding Applications™

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