

Date: February 2021
Rev: IX
No. of Components: Two
Mix Ratio by Weight: 10 : 1
Specific Gravity: Part A: 1.20 Part B: 1.02
Pot Life: 4 Hours
Shelf Life- Bulk: One year at room temperature

Recommended Cure: 150°C / 1 Hour

Minimum Alternative Cure(s):
May not achieve performance properties listed below
 150°C / 5 Minutes
 120°C / 20 Minutes
 100°C / 60 Minutes
 80°C / 90 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.

Product Description: EPO-TEK® OE175-2 is a two component, high temperature epoxy designed for semiconductor, hybrid, fiber optic, and medical applications. It is a modified alternative to EPO-TEK® 375 with improved wetting. Also available in a single component frozen syringe.

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: Cloudy	Part B: Amber	
* Consistency:	Pourable liquid		
* Viscosity (23°C) @ 50 rpm:	3,000 - 5,000	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:	48	x 10 ⁻⁶ in/in°C	
Above Tg:	208	x 10 ⁻⁶ in/in°C	
Shore D Hardness:	81		
Lap Shear @ 23°C:	> 2,000	psi	
Die Shear @ 23°C:	≥ 20	Kg	7,112 psi
Degradation Temp:	470 °C		
Weight Loss:			
@ 200°C:	< 0.05	%	
@ 250°C:	< 0.05	%	
@ 300°C:	0.11	%	
Suggested Operating Temperature:	< 300	°C (Intermittent)	
Storage Modulus:	267,960	psi	
Particle Size:	N/A		

ELECTRICAL AND THERMAL PROPERTIES:			
Thermal Conductivity:	N/A		
Volume Resistivity @ 23°C:	≥ 6 x 10 ¹²	Ohm-cm	
Dielectric Constant (1KHz):	4.32		
Dissipation Factor (1KHz):	0.012		

OPTICAL PROPERTIES @ 23°C:			
Spectral Transmission:	≥ 92% @ 800-1640	nm	
Refractive Index:	1.5685 @589	nm	

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.

EPOXY TECHNOLOGY, INC.

14 FORTUNE DRIVE, BILLERICA, MA 01821 (978) 667-3805, FAX (978) 663-9782

www.epotek.com

EPO-TEK® OE175-2 Advantages & Suggested Application Notes:

- Modified alternative to EPO-TEK® 375 with improved wetting
- Optimal for semiconductor hybrid and fiber optic applications
- Semiconductor: wafer to wafer bonding for CSP, fabrication of MEMs devices and flip chip underfill with excellent wetting and strength to silicon wafers
- Hybrid Electronics: high temperature compatible and can provide near hermetic seals in a variety of packing formats
- Fiber Optic: designed to meet Telcordia 1221
 - Common in fiber to ferrule offering transmission from 800-1,550 nm
 - Fiber component packaging; adhesive for active alignment of optics and environmental sealing of opto packages
- Electronic Assembly; used to laminate PZT piezoelectric ceramic found in ultrasound and ink-jet printers
 - Insulates and flows into copper coil windings for motor and induction coils

Epoxy Technology 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.

EPOXY TECHNOLOGY, INC.

14 FORTUNE DRIVE, BILLERICA, MA 01821 (978) 667-3805, FAX (978) 663-9782

www.epotek.com