

Date: February 2021
Rev: XII
No. of Components: Two
Mix Ratio by Weight: 10 : 5.5
Specific Gravity: Part A: 1.11 Part B: 1.08
Pot Life: 2.5 Hours
Shelf Life- Bulk: One year at room temperature

Recommended Cure: 65°C / 2 Hours

Minimum Alternative Cure(s):
May not achieve performance properties listed below
 23°C / 24 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® 310M is a two component, flexible, optically clear epoxy adhesive designed for optical, semiconductor, and medical applications.

Typical Properties: Cure condition: Varies as required 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/Colorless	Part B: Clear	
* Consistency:	Pourable liquid		
* Viscosity (23°C) @ 100 rpm:	450 - 850	cPs	
Thixotropic Index:	N/A		
* Glass Transition Temp:	≤ 30	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):			
Below Tg:	78	x 10 ⁻⁶ in/in°C	
Above Tg:	222	x 10 ⁻⁶ in/in°C	
Shore A Hardness:	69		
Lap Shear @ 23°C:	306	psi	
Die Shear @ 23°C:	≥ 2	Kg	711 psi
Degradation Temp:	397	°C	
Weight Loss:			
@ 200°C:	0.09	%	
@ 250°C:	0.28	%	
@ 300°C:	0.64	%	
Suggested Operating Temperature:	< 300	°C (Intermittent)	
Storage Modulus:	604	psi	
Particle Size:	N/A		

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	N/A	
Volume Resistivity @ 23°C:	≥ 1.8 x 10 ¹⁰	Ohm-cm
Dielectric Constant (1KHz):	8.23	
Dissipation Factor (1KHz):	0.122	

OPTICAL PROPERTIES @ 23°C:		
Spectral Transmission:	≥97% @ 400-1300	nm
	≥90% @ 1400-2200	nm
Refractive Index (uncured):	1.4969 @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.

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www.epotek.com

EPO-TEK® 310M Advantages & Suggested Application Notes:

- Ease of use; it can be applied by spatula, brush, or syringe via commercial dispensing equipment. It has a low viscosity, water-like appearance.
- Optical:
 - Bonds to all types of glasses, metals, ceramics, and most plastics including PP or PE.
 - Good Spectral Transmission from 400 - 2200 nm range.
 - Flexible nature makes it an excellent material for low-stress potting applications.
- Semiconductor:
 - Suitable for glob top encapsulant or underfill. Flexibility and resiliency can outperform or replace silicone RTVs at all levels of packaging.

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