

Date: September 2024
Rev: X
No. of Components: Two
Mix Ratio by Weight: 100 : 33
Specific Gravity: Part A: 1.20 Part B: 0.98
Pot Life: 2 Hours
Shelf Life- Bulk: One year at room temperature

Recommended Cure: 80°C / 1 Hour

Minimum Alternative Cure(s):
May not achieve performance properties listed below
 65°C / 3 Hours
 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**
- If product crystallizes in storage, place container in warm oven until crystallization disappears. Please refer to Tech Tip #7 on website.

Product Description: A version of EPO-TEK® 302-3M designed to meet European regulatory requirements. It is a two component epoxy used for optical, fiber optic, and semiconductor applications. The epoxy is good for adhesive joining, sealing, potting, or as a coating.

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, slightly yellow	Part B: Clear, yellow/orange	
* Consistency:	Pourable liquid		
* Viscosity (23°C) @ 100 rpm:	300 - 900	cPs	
Thixotropic Index:	N/A		
* Glass Transition Temp:	≥ 45	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	63	x 10 ⁻⁶ in/in°C
	Above Tg:	214	x 10 ⁻⁶ in/in°C
Shore D Hardness:	83		
Lap Shear @ 23°C:	> 2,000	psi	
Die Shear @ 23°C:	≥ 20	Kg	8,528 psi
Degradation Temp:	364	°C	
Weight Loss:			
	@ 200°C:	0.15	%
	@ 250°C:	0.44	%
	@ 300°C:	1.64	%
Suggested Operating Temperature:	< 300	°C (Intermittent)	
Storage Modulus @ 23°C:	385,000	psi	
Particle Size:	N/A		

OPTICAL PROPERTIES @ 23°C:		
Spectral Transmission:	> 98% @ 460-1620	nm
Refractive Index (uncured):	1.5442 @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.

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EPO-TEK[®] 302-3M-R Advantages & Suggested Application Notes:

- Low viscosity, optically clear epoxy is well suited for potting applications, and for transmitting VIS or NIR light in opto-circuits
- Suggested Applications:
 - Fiber Optic/Optical:
 - Potting and encapsulation; lens and prism bonding for Scientific / OEM instruments; LED encapsulant.
 - Transmission in the VIS/NIR range from 350 – 1550 nm. Can be used in the optical pathway
 - Potting or sealing the fiber into the snout of the opto-package.
 - Adhesive for V-groove, fiber arrays or lens arrays.
 - Bonding optical fibers into ferrules. Fibers of glass or plastic. Ferrules of glass, quartz, stainless steel, kovar, or ceramic.
 - Semiconductor:
 - Recommended for underfilling of flip chips or SMDs on PCB; can also be used for COB glob top process using a DAM/FILL method; can resist 85/85 moisture soaks, as well as Tcycles and Tshocks

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