

Date: April 2023
Rev: III
No. of Components: Two
Mix Ratio by Weight: 100 : 35
Specific Gravity: Part A: 1.15 Part B: 0.95
Pot Life: 10 Hours
Shelf Life- Bulk: One year at room temperature
Shelf Life- Syringe: Six months at -40°C

Recommended Cure: 80°C / 3 Hours

Minimum Alternative Cure(s):
May not achieve performance properties listed below
 23°C / 3 Days

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.
- If product crystallizes in storage, place container in warm oven until crystallization disappears. Please refer to Tech Tip #7 on website.

Product Description: EPO-TEK® 301-2FL-G (formerly R&D #133-28-1) is a two component optical and semiconductor grade epoxy resin. It is a version of EPO-TEK® 301-2FL with an indicator added for enhanced process control.

Typical Properties: Cure condition: 80°C / 3 Hours 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/Colorless	
* Consistency:	Pourable liquid		
* Viscosity (23°C) @ 100 rpm:	174	cPs	
Thixotropic Index:	N/A		
* Glass Transition Temp:	54	°C	(Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	56	x 10 ⁻⁶ in/in°C
	Above Tg:	211	x 10 ⁻⁶ in/in°C
Shore D Hardness:	75		
Die Shear @ 23°C:	12	Kg	
Degradation Temp:	329 °C		
Weight Loss:			
	@ 200°C:	0.11	%
	@ 250°C:	0.53	%
	@ 300°C:	3.78	%
Suggested Operating Temperature:	< 250 °C (Intermittent)		
Particle Size:	N/A		

OPTICAL PROPERTIES @ 23°C:			
Refractive Index:	1.5103 @ 589	nm	
Indicator Absorption Peak:	375	nm	
Indicator Emission Peak:	440	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® 301-2FL-G Advantages & Suggested Application Notes:

- Suggested for LCD optical lamination and sealing of glass plates. The product can resist yellowing over 17 days of continuous UV light exposure. Suitable for LED encapsulation.
- Ease of use: potting and casting, encapsulation, and adhesive.
- Semiconductor applications: underfill for flip chips, glob top encapsulation over wire bonds, spin coating at wafer level.
- Compliant adhesive that will be resistant to impact or vibrations. Low stress adhesive for bonding optics inside OEM / scientific instruments.
- Fiber optic adhesive; bundling fibers, terminating fiber into ferrule, adhesive for mounting optics inside fiber components, bonding glass cover slip over V-groove; spectral transmission of visible and IR light.
- Adhesion to glass, quartz, metals, wood and most plastics is very good.
- May also be used for impregnating wooden or porous objects for artifact restoration.
- Capable of both heat cure and room temperature cure.

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