



Manufacturer:
Epoxy Technology

Product Name:
EPO-TEK® 301-2FL Clear Epoxy, Heat Cure (2.5g)

Manufacturer Part Number:
ET301-2FL-2.5G



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▶ Click here for more details on the EPO-TEK® 301-2FL Clear Epoxy, Heat Cure (2.5g)



EPO-TEK® 301-2FL

Technical Data Sheet
For Reference Only
Low Stress, Optical Epoxy

Date: August 2021
Rev: XI
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.

Product Description: EPO-TEK® 301-2FL is a two component optical and semiconductor grade epoxy resin. It is a more flexible version of EPO-TEK® 301-2.

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:	100 - 200	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:	56	x 10 ⁻⁶ in/in°C
Above Tg:	211	x 10 ⁻⁶ in/in°C
Shore D Hardness:	70	
Lap Shear @ 23°C:	> 2,000	psi
Die Shear @ 23°C:	≥ 10	Kg 3,556 psi
Degradation Temp:	325	°C
Weight Loss:		
@ 200°C:	0.50	%
@ 250°C:	0.96	%
@ 300°C:	3.52	%
Suggested Operating Temperature:	< 250	°C (Intermittent)
Storage Modulus:	318,685	psi
Ion Content:	Cl ⁻ : 105 ppm	Na ⁺ : 58 ppm
	NH ₄ ⁺ : 8 ppm	K ⁺ : 19 ppm
Particle Size:	N/A	

ELECTRICAL AND THERMAL PROPERTIES:

Thermal Conductivity:	N/A
Volume Resistivity @ 23°C:	≥ 0.6 x 10 ¹² Ohm-cm
Dielectric Constant (1KHz):	3.54
Dissipation Factor (1KHz):	0.013

OPTICAL PROPERTIES @ 23°C:

Spectral Transmission:	≥ 97% @ 1,000-1,600 nm
	≥ 99% @ 400-1,000 nm
Refractive Index:	1.5102 @ 589 nm

Epoxyes and Adhesives for Demanding Applications™

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

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Product specifications and data are
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EPO-TEK® 301-2FL 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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