

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	100:35	80°C	3 Hours
Specific Gravity:		23°C	3 Days
Part A	1.06		
Part B	0.89		
Pot Life:	10 Hours		
Shelf Life:	One year at room temperature.		

Note: Container(s) should be kept closed when not in use. *Please see Applications Note available on our website.

-IF PART A CRYSTALLIZES IN STORAGE, PLACE CONTAINER IN A WARM OVEN UNTIL CRYSTALLIZATION DISAPPEARS. ALLOW TO COOL TO ROOM TEMPERATURE BEFORE MIXING WITH THE PART B HARDENER *Please refer to Tech Tip #7 on our website --

Product Description:

EPO-TEK[®] 301-2FL is a two component optical, medical, and semiconductor grade epoxy resin. It is a more flexible version of EPO-TEK[®] 301-2.

EPO-TEK[®] 301-2FL Advantages & 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.
- BIOCOMPATIBLE and NON-TOXIC; complies with USP Class VI biocompatibility standards for medical devices and implantation applications.
- 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.

Typical Properties: (To be used as a guide only, not as a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results; Cure condition: 80°C/3 Hours ; *denotes test on lot acceptance basis)

Physical Properties:	
*Color: Part A: Clear/Colorless Part B: Clear/Colorless	Weight Loss:
*Consistency: Pourable Liquid	@ 200°C: 0.50%
*Viscosity (@ 100 RPM/23°C): 100 – 200 cPs	@ 250°C: 0.96%
Thixotropic Index: N/A	@ 300°C: 3.52%
*Glass Transition Temp.(Tg): ≥ 45°C (Dynamic Cure 20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	Operating Temp:
Coefficient of Thermal Expansion (CTE):	Continuous: - 55°C to 150°C
Below Tg: 56 x 10 ⁻⁶ in/in/°C	Intermittent: - 55°C to 250°C
Above Tg: 211 x 10 ⁻⁶ in/in/°C	Storage Modulus @ 23°C: 152,946 psi
Shore D Hardness: 70	Ions: Cl ⁻ 105 ppm
Lap Shear Strength @ 23°C: > 2,000 psi	Na ⁺ 58 ppm
Die Shear Strength @ 23°C: ≥ 10 Kg / 3,400 psi	NH ₄ ⁺ 8 ppm
Degradation Temp. (TGA): 325°C	K ⁺ 19 ppm
	Particle Size: N/A
Optical Properties @ 23°C:	
Refractive Index @ 23°C (uncured): 1.5115 @ 589 nm	Spectral Transmission: > 97% @ 1000 – 1600 nm
	> 99% @ 400 – 1000 nm
Electrical & Thermal Properties:	
Thermal Conductivity: N/A	Volume Resistivity: ≥ 0.6 x 10 ¹² Ohm-cm
Dielectric Constant (1 KHz): 3.54	Dissipation Factor (1 KHz): 0.013

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