EPOXY TECHNOLOGY

EPO-TEK® 302
Technical Data Sheet
For Reference Only
Fast Setting, Optical Epoxy

Number of Components:	Two	Minimum Bond Line Cure Schedule*:	
Mix Ratio By Weight:	1:1	23°C	2 Hours
Specific Gravity:			
Part A	1.20		
Part B	0.90		
Pot Life:	10 Minutes		
Shelf Life:	10 Months at room temperature		

*Note: Container(s) should be kept closed when not in use. *Please see Applications Note available on our website.*
- TOTAL MASS SHOULD NOT EXCEED 25 GRAMS -

Product Description:

EPO-TEK® 302 is a two component, fast-gelling, room temperature curing epoxy, designed for electronic, optical, medical, and general applications.

EPO-TEK® 302 Advantages & Application Notes:

- Due to its versatility, it may be used to adhere, seal, pot or encapsulate.
- Allows for % transmission in VIS and NIR range. It can be used as an adhesive in the optical pathway of light.
- Convenient and easy to use 1:1 mix ratio allows for hand, meter mix, or specialty packaging.
- Suggested applications:
  - Field Assembly: mix and cure in the field. Fast gelling and curing in 2-3 hours is accomplished.
  - Electronics: rapid prototyping of parts with fast curing epoxy – no need for oven cycle times.
  - Optics: active alignment of optics such as lenses, prisms, diodes, filters, etc. to opto-circuit.
  - Fiber Optics: “field curing” or field assembly of connectors and couplers; also suggested for fiber optic splicing.
  - Medical: adhesion to most metals, plastics, ceramics, and glasses found in tubing, substrates or housing.
  - General: arts and crafts repair, restoration, and hobbyists.

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: varies as required; * denotes test on lot acceptance basis)***

Physical Properties:	
***Color: Part A:** Clear/Colorless **Part B:** Clear/Colorless	**Die Shear Strength @ 23°C:** ≥ 5 Kg / 1,700 psi
***Consistency:** Pourable liquid	**Degradation Temp. (TGA):** 261°C
***Viscosity (@ 20 RPM/23°C):** 5,000 – 10,000 cPs	**Weight Loss:**
Thixotropic Index: N/A	**@ 200°C:** 2.68%
***Glass Transition Temp.(Tg):** ≥ 40°C (Dynamic Cure 20—200°C /ISO 25 Min; Ramp -10—200°C @ 20°C/Min)	**@ 250°C:** 8.39%
	@ 300°C:
Coefficient of Thermal Expansion (CTE):	**Operating Temp:**
Below Tg: 52 x 10^{-6} in/in/°C	**Continuous:** - 55°C to 100°C
Above Tg: 191 x 10^{-6} in/in/°C	**Intermittent:** - 55°C to 200°C
Shore D Hardness: 73	**Storage Modulus @ 23°C:** 153,918 psi
Lap Shear Strength @ 23°C: 1,756psi	**Particle Size:** N/A
Optical Properties @ 23°C:	
Index of Refraction @ 23°C: 1.5442 @ 589 nm	**Spectral Transmission @ 23°C:** > 75% @ 340 - 420 nm > 85% @ 440 - 900 nm > 88% @ 900 - 1600 nm
Electrical & Thermal Properties:	
Thermal Conductivity: N/A	**Volume Resistivity @ 23°C:** ≥ 2 x 10^{13} Ohm-cm
Dielectric Constant (1KHz): 2.95	**Dissipation Factor (1KHz):** 0.010

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