Manufacturer:
Epoxy Technology

Product Name:
EPO-TEK® 302 Fast Setting Epoxy, Room Temperature Cure (2.5g)

Manufacturer Part Number:
ET302-2.5G

EPO-TEK® 302

Technical Data Sheet
For Reference Only
Fast Setting, Optical Epoxy

Date:	September 2017	**Recommended Cure: 23°C / 2 Hours**
Rev:	VI	
No. of Components:	Two	
Mix Ratio by Weight:	1 : 1	
Specific Gravity:	Part A: 1.20	Part B: 0.90
Pot Life:	10 Minutes	
Shelf Life- Bulk:	10 months at room temperature	

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*

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

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/Colorless	Part B: Clear/Colorless
* Consistency:	Pourable liquid	
* Viscosity (23°C) @ 20 rpm:	5,000 - 10,000	cPs
Thixotropic Index:	N/A	
* Glass Transition Temp:	≥ 40	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):		
Below Tg:	52	x 10^{-6} in/in°C
Above Tg:	191	x 10^{-6} in/in°C
Shore D Hardness:	73	
Lap Shear @ 23°C:	1,756	psi
Die Shear @ 23°C:	≥ 5	Kg 1,778 psi
Degradation Temp:	261	°C
Weight Loss:		
@ 200°C:	2.68	%
@ 250°C:	8.39	%
Suggested Operating Temperature:	< 200	°C (Intermittent)
Storage Modulus:	153,918	psi
* Particle Size:	N/A	

ELECTRICAL AND 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	

OPTICAL PROPERTIES @ 23°C:		
Spectral Transmission:	> 75% @ 340 - 420	nm
	> 85% @ 440 - 900	nm
	> 88% @ 900 - 1600	nm
Refractive Index:	1.5442 @ 589	nm

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EPO-TEK® 302 Advantages & Suggested 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.
  - General: arts and crafts repair, restoration, and hobbyists.