

Date: October 2025
Rev: II
No. of Components: Two
Mix Ratio by Weight: 100 : 6
Specific Gravity: Part A: 1.18, Part B: 1.23
Pot Life: 4 days
Shelf Life- Bulk: One year at room temperature
Shelf Life- Syringe: Six months at -40°C

Biocompatible Certified Cure: 150°C / 1 Hour
Alternative biocompatible cure schedules may be possible, but have not been certified. Contact med@epotek.com with any questions.

Product Description:

EPO-TEK® MED-314 is ISO 10993-5 biocompatible, clear, and colorless optical-grade epoxy with low viscosity. It features an extended pot life, which requires oven curing. The material is designed for adhesive, sealing, potting, and fiber optic impregnation applications, though special care is recommended for encapsulation uses. Certified to ASTM E595, MED-314 is recognized as a low outgassing epoxy.

Typical Properties:

Cure condition: 150°C / 1 Hour

Different batches, conditions, and 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.

Notes:

- Available in Premixed Frozen Syringes (PMF) or bulk A&B containers.
- Container(s) should be kept closed when not in use.
- Performance properties (rheology, conductivity, others) of the product may vary from those stated on the data sheet when 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 of packaging.
- Syringe packaging will impact initial viscosity and effective pot life, potentially beyond stated parameters.

Physical Properties	Details
* Color (before cure)	Part A: Clear/Colorless, Part B: Amber
* Consistency	Pourable liquid
* Viscosity (23°C) @ 100 rpm	300-600 cPs
Thixotropic Index	N/A
* Glass Transition Temp	≥ 75 °C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE)	Below Tg: 39 x 10 ⁻⁶ in/in°C, Above Tg: 134 x 10 ⁻⁶ in/in°C
Shore D Hardness	83
Lap Shear @ 23°C	800 psi
Die Shear @ 23°C	≥ 15 Kg (5,334 psi)
Degradation Temperature	361°C
Weight Loss:	@ 200°C: 0.18 %, @ 250°C: 0.43 %, @ 300°C: 1.03 %
Suggested Operating Temperature	< 300°C (Intermittent)
Storage Modulus:	275,210 psi
Particle Size	N/A

Optical Properties @ 23°C	Details
Spectral Transmission:	≥ 96% @ 440-1680 nm
Refractive Index (uncured):	1.4965 @589 nm

EPO-TEK® MED-314 Advantages & Suggested Application Notes

- EPO-TEK® MED-314 (cured at 150 °C for 1 hour) has been tested and certified to ISO 10993-5 (Cytotoxicity).
- Resistant to a few cycles of ETO and gamma radiation, and autoclave steam sterilization.
- Low outgassing epoxy- passed ASTM 595
- **Suggested camera, fiber optic & endoscopy applications:**
 - Impregnation of fiber optic bundles (FOBs) and light guides.
 - Adhesive for rigid and flexible endoscope construction.
 - Fiber optic termination into ferrules, pipes, and bore holes; excellent adhesion to stainless steel, glass, and ceramic.
 - Transmission of VIS and NIR light signals in camera and video electro-optics.
 - General-purpose fiber optic assembly; also used for after-market endoscope repair.
- **Suggested surgical tools applications:**
 - Adhesive for high-power surgical lasers and other surgical instruments



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