

# EPO-TEK® MED-OG198-54

Technical Data Sheet  
For Reference Only

Biocompatible / Shadow Curable Capable / UV Curing Epoxy  
ISO 10993 Tested/Fully Compliant

**Date:** April 2022  
**Rev:** X  
**No. of Components:** Single  
**Mix Ratio by Weight:** N/A  
**Specific Gravity:** 1.14  
**Pot Life:** N/A  
**Shelf Life- Bulk:** Six months refrigerated  
**Shelf Life- Syringe:** Six months refrigerated

**Biocompatible Certified Cure:**  
**UV 100mW/cm<sup>2</sup> 320-500nm/5 Minutes**

*Alternative biocompatible cure schedules may be possible, but have not been certified. Contact [med@epotek.com](mailto:med@epotek.com) with any questions.*

### 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.

**Product Description:** EPO-TEK® MED-OG198-54 is a biocompatible, clear, low viscosity, high Tg, high strength, cationic/epoxy UV curing adhesive. It has capillary wicking and is capable of reaching shadowed regions using an oven post cure. It is used in many types of surgical and dental tools, fiber optic lasers, active optics and lenses.

**Typical Properties:** Cure condition: UV 100mW/cm<sup>2</sup> 320-500nm/5 Minutes Data below is not guaranteed. Different batches, conditions & applications yield differing results. To be used as a guide only, not as a specification.

\* denotes test on lot acceptance basis

PHYSICAL PROPERTIES:			
* Color (before cure):	Clear/Colorless		
* Consistency:	Pourable liquid		
* Viscosity (23°C) @ 100 rpm:	200-450	cPs	
* Glass Transition Temp:	≥ 115	°C	(Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):			
Below Tg:	59	x 10 <sup>-6</sup> in/in °C	
Above Tg:	210	x 10 <sup>-6</sup> in/in °C	
Shore D Hardness:	85		
Die Shear @ 23°C:	≥ 15	Kg	5,334 psi
Degradation Temp:	373	°C	
Weight Loss:			
@ 200°C:	0.41	%	
@ 250°C:	0.98	%	
@ 300°C:	2.00	%	
Suggested Operating Temperature:	< 300	°C	(Intermittent)
Storage Modulus:	467,434	psi	
OPTICAL PROPERTIES:			
Spectral Transmission:	≥ 98%	440-1680	nm
Refractive Index:	1.5031	@589	nm

### Epoxyes and Adhesives for Demanding Applications™

**This information is based on data and tests believed to be accurate. Epoxy Technology, Inc. makes no warranties (expressed or implied) as to its accuracy and assumes no liability in connection with any use of this product.**

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## Fiber and Electro-Optics

- Adhesive in fiber optic lasers whether diagnostic probes, mammography surgical tools, biopharmaceutical spectroscopy and photodynamic therapy (PDT)
- Potting epoxy for fiber image bundles in endoscopes

## Imaging Technologies

- Sealing glass plates, TCO's and films in digital radiography imaging applications
- Active alignment of optics for catheter delivered OCT - essentially opto-ultrasound
- Potting for CMOS camera chip package

## Device and Diagnostics

- Sensor integration and subcomponents for respiratory, anesthesia, vapor and suction; gas and liquid flow monitoring
- SpO<sub>2</sub> patient monitoring; capnography, gas analyzers and flow meters
- Adhesive for surgical navigation, pressure and pH monitoring catheters

## Implantable Devices

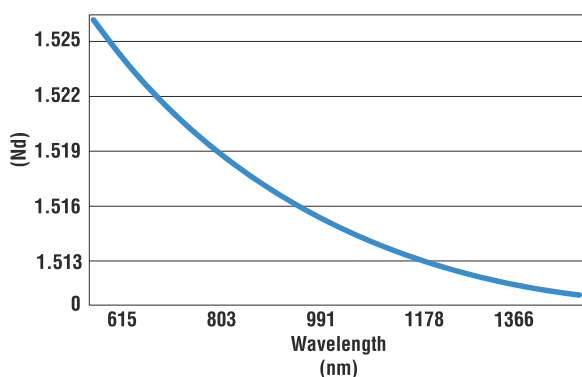
- Adhesive for ophthalmic implants; plastic bonding in intraocular lens (IOL) Micro sensors for intraocular pressure
- Hearing aids and implants; acoustic circuits and structural assembly
- Adhesive for pacemaker devices, ICDs and IPGs
- Neurovascular implants treating aneurysm, stroke, epilepsy and Parkinson's Disease
- Adhesive for fabrication of Continuous Glucose Monitoring circuits (CGMs)

## Surgical Tools

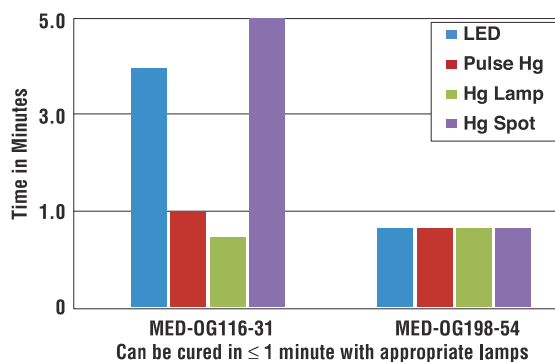
- High power laser optics for dental
- Dental device adhesive, lighting or hand instrument
- Adhesive for neurovascular surgical delivery systems and coils for treating aneurysms
- Fabrication of Rf Ablation catheters
- Laser for peripheral artery disease (PAD); atherectomy technologies
- Microsurgical instruments for ophthalmology

EPO-TEK® MED-OG198-54 is a specialized cationic based UV curing adhesive with versatility in curing method/ lamps selected. It also has excellent capillary wicking action and is capable of reaching shadowed regions using an oven post-cure.

Index of Refraction vs Wavelength EPO-TEK® MED-OG198-54



Comparative Cure Times with Various UV Lamps



## Biocompatibility Approvals

- EPO-TEK® MED-OG198-54 cured with UV for 5 minutes has been tested and is ISO 10993 certified, meeting Hemolysis (10993-4), Cytotoxicity (10993-5), Implantation (10993-6), Intracutaneous (10993-10), Sensitization (10993-10) and Systemic Toxicity (10993-11) test protocols.

## Sterilization Information

- MED-OG198-54 is Sterrad® 100NX resistant, anecdotally reported.
- Gamma radiation/ion beam will discolor MED-OG198-54 thus altering its UV-VIS transmission. See Technical Tip #29: Gamma Sterilization for Medical Devices and its Effect on Epoxies for more information: [http://www.epotek.com/site/files/Techtips/pdfs/techtips\\_29.pdf](http://www.epotek.com/site/files/Techtips/pdfs/techtips_29.pdf)
- MED-OG198-54 is generally regarded for resisting few ETO sterilization cycles.

## Packaging Availability

- EPO-TEK® MED-OG198-54 is available in specialty packaging, black colored syringes.



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