EPO-TEK® MED-730-110

Technical Data Sheet
For Reference Only
Biocompatible/Structural Epoxy
ISO 10993-5 Tested/Compliant

Date:	November 2019
Rev:	I
No. of Components:	Two
Mix Ratio by Weight:	1 : 1
Specific Gravity:	Part A: 1.15 Part B: 0.96
Pot Life:	1 Hour
Shelf Life- Bulk:	One year at room temperature

Biocompatible Certified Cure: 80°C / 2 Hours

Alternative biocompatible cure schedules may be possible, but have not been certified. Contact med@epotek.com with any questions.

NOTES:

- 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 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.

Product Description: EPO-TEK® MED-730-110 is a biocompatible, medium viscosity, room temperature-curing, thermally and electrically insulating epoxy. It can be used for sealing, potting, or encapsulation applications found in many medical devices.

Typical Properties: Cure condition: 80°C / 2 Hours 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: Transparent Yellow	
* Consistency:	Pourable liquid		
* Viscosity (23°C) @ 20 rpm:	8,000 - 12,000	cPs	
Thixotropic Index:	N/A		
* Glass Transition Temp:	≥ 50	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):			
Below Tg:	65	x 10^{-6} in/in°C	
Above Tg:	160	x 10^{-6} in/in°C	
Shore D Hardness:	75		
Lap Shear @ 23°C:	1,976	psi	
Die Shear @ 23°C:	≥ 15	Kg	5,334 psi
Degradation Temp:	351	°C	
Weight Loss:			
@ 200°C:	0.37	%	
@ 250°C:	0.79	%	
@ 300°C:	2.33	%	
Suggested Operating Temperature:	< 300	°C (Intermittent)	
Storage Modulus:	188,625	psi	
Particle Size:	N/A		

ELECTRICAL AND THERMAL PROPERTIES:	
Thermal Conductivity:	N/A

OPTICAL PROPERTIES @ 23°C:		
Spectral Transmission:	≥ 89% @ 400-1380	nm
Refractive Index:	1.5314 @589	nm

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Selected Applications of EPO-TEK® MED-730-110

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Fiber and Electro-Optics

- Excellent adhesion to plastic, structural and near hermetic sealing of glass, ceramic and metals
- After market repair of endoscopes, such as, laryngoscopes, gastroscopes, broncho-scopes and micro ophthalmoscopes; healthcare optics for colonoscopy, urology, and otolaryngology
- Well suited for flexible endoscopes

Imaging Technologies

- Endoscopy with camera and video interface
- Ultrasound imaging used in back-end buildup
- Temperature probes integration, subcomponent bonding and final assembly of MRI and CT machines

Catheters

- Catheter delivered surgical mapping, 3D imaging and mapping catheters; catheter ultrasound for cardiac therapy, such as AFib treatments
- Widely used adhesive for Pt marking bands, plastic tubing, catheter balloons
- Fabrication of Rf Ablation catheters, electro-surgical tool for tissue removal
- Adhesion to Pebax®, polyimide, polyurethane and latex

Life Style

- Potting, over-coating and weather proofing, fitness style wrist watches and wearable devices

Device and Diagnostics

- Sensor integration and subcomponents for respiratory, anesthesia, vapor and suction; gas and liquid flow monitoring
- SpO_2 patient monitoring; capnography, gas analyzers and flow meters

Implantable Devices

- Hearing aids and implants; acoustic circuits and structural assembly

Surgical Tools

- Dental device adhesive, lighting or hand instrument
- Impregnating coils of electric motors

Biocompatibility Approvals

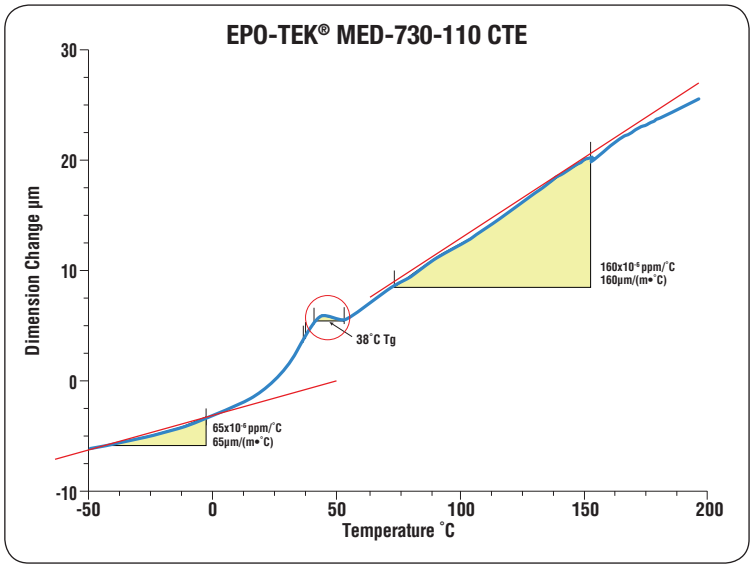
- EPO-TEK® MED-730-110 cured at 80°C for 2 hours has been tested and is ISO 10993-5 certified (Cytotoxicity testing by MEM Elution methodology).

Sterilization/Disinfection Information

- Epoxy performance is most influenced by surface preparation and cleanliness, overall process and handling, and finally proper curing selection. While bulk samples of MED-730-110 may resist sterilization technologies such as autoclave steam, gaseous technologies, gamma radiation as well as liquid disinfectants, the glue joints may differ. All users need to determine the suitability of MED-730-110 for their given application.
- Gamma radiation/ion beam will discolor MED-730-110, thus altering its appearance.
  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
- MED-730-110 is generally regarded for resisting few cycles of ETO and gamma radiation.
- MED-730-110 is generally regarded for resisting <360 cycles of liquid disinfection.
- MED-730-110 has resisted nitric acid in scientific labware repairs.

Packaging Availability

- EPO-TEK® MED-730-110 is available in specialty packaging such as 50ml dual cartridge or bulk (A & B containers).



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