EPO-TEK® CF6-2

Technical Data Sheet
For Reference Only
High Temperature Epoxy

Date:	September 2024	**Recommended Cure: 150°C / 1 Hour**
Rev:	V	
No. of Components:	Two	
Mix Ratio by Weight:	1 : 1	
Specific Gravity:	Part A: 1.21 Part B: 1.22	
Pot Life:	18 Hours	
Shelf Life- Bulk:	One year 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.

Product Description: EPO-TEK® CF6-2 is a two component, high temperature and high Tg epoxy designed for fiber optic packaging.

Typical Properties: Cure condition: 150°C / 1 Hour 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/Pale Yellow	Part B: Amber
* Consistency:	Pourable liquid	
* Viscosity (23°C) @ 100 rpm:	800 - 1,200	cPs
Thixotropic Index:	N/A	
* Glass Transition Temp:	≥ 110	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min)
Coefficient of Thermal Expansion (CTE):		
Below Tg:	69	x 10^{-6} in/in°C
Above Tg:	175	x 10^{-6} in/in°C
Shore D Hardness:	84	
Lap Shear @ 23°C:	1,144	psi
Die Shear @ 23°C:	≥ 15	Kg 5,334 psi
Degradation Temp:	360	°C
Weight Loss:		
@ 250°C:	0.13	%
@ 300°C:	0.69	%
Suggested Operating Temperature:	< 300	°C (Intermittent)
Storage Modulus:	287,289	psi
Particle Size:	N/A	

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	N/A	
Volume Resistivity @ 23°C:	≥ 1.8 x 10^{13}	Ohm-cm
Dielectric Constant (1KHz):	2.99	
Dissipation Factor (1KHz):	0.005	

OPTICAL PROPERTIES @ 23°C:		
Spectral Transmission:	> 97% @ 700-2000	nm
Refractive Index:	1.5336 @ 589	nm

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EPO-TEK® CF6-2 Advantages & Suggested Application Notes:

- The low viscosity nature allows for wicking and impregnating into fiber optic bundles, commonly found in medical or sensor industries.
- Low outgassing nature makes it ideal for high temperature fiber optic environments.
- Suggested Applications:
  - Sensor Devices: down hole fiber sensors for petro-chemical industries. High power laser light beam delivery.
  - Optics: Spectral Transmission in the VIS and IR region > 600 nm range.
- Amber color change upon cure allows for visual ID inspection of cure.
- Convenient 1:1 mix ratio allows for static mixing, or specialty packaging in double-barrel syringes.

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