EPO-TEK® OG198-54

Technical Data Sheet
For Reference Only
Shadow Curable UV Epoxy

Date: September 2023 **Rev:** XVIII
No. of Components: Single
Specific Gravity: 1.12
Pot Life: N/A
Shelf Life- Bulk: Six months refrigerated
Shelf Life- Syringe: Six months refrigerated

Recommended Cure	
Iron-Doped Mercury Flood Lamp *100 mW/cm² @ 240-365 nm*	**> 30 sec.**
Alternative Cures*	
Iron-Doped Mercury Spot Lamp	> 30 sec.
365nm LED Flood Lamp	> 30 sec.
Pulsed Mercury Lamp	> 30 sec.
UV Cure is complete after 24 hours from UV Exposure	
* Contact Technical Services for application-specific variations	

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® OG198-54 is a single component, low viscosity, electrically and thermally insulating UV cure epoxy.

Typical Properties: ***Cure condition: varies as required *denotes test on lot acceptance basis Data below is not guaranteed. To be used as a guide only, not as a specification. Different batches, conditions & applications yield differing results.***

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:	74 x 10^{-6}	in/in°C	
Above Tg:	145 x 10^{-6}	in/in°C	
Shore D Hardness:	86		
Die Shear:			
UV Cure:	≥ 10 Kg	3,556	psi
UV Cure + 23°C/24 Hours:	20.8 Kg	7,396.5	psi
UV Cure + 80°C/1 Hour:	22.2 Kg	7,894.3	psi
Degradation Temp:	369	°C	
Weight Loss: **@ 200°C**	0.24	**%**	
@ 250°C	0.62	**%**	
@ 300°C	1.80	**%**	
Suggested Operating Temperature:	< 300	°C	(Intermittent)
Storage Modulus:	449,431	psi	

OPTICAL PROPERTIES @ 23°C:

Spectral Transmission:	≥ 97% @ 460-1,680 nm
Refractive Index (uncured):	1.5046 @ 589 nm
Refractive Index (cured):	1.5256 @ 589 nm

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EPO-TEK® OG198-54 Advantages & Suggested Application Notes:

- UV shadow cure allows for enhanced performance after a thermal post cure and significant cure propagation into shadow area.
- High Tg.
- Strong transmission in the Visible and IR regions.
- Suggested Applications:
  - Active alignment of optics
  - Bonding fibers to V-grooves
  - Fiber pigtails
  - Alignment in optoelectronic hybrids
  - Semiconductor devices

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