EPO-TEK® OG154-1

Technical Data Sheet

For Reference Only

UV Cure Optical Epoxy

Date: February 2022 **Rev:** XII

No. of Components: Single

Mix Ratio by Weight: N/A

Specific Gravity: 1.1

Pot Life: N/A

Shelf Life- Bulk: One year refrigerated

Shelf Life- Syringe: One year refrigerated

Recommended Cure	
Iron-Doped Mercury Flood Lamp	**> 30 sec.**
100 mW/cm² @ 240-365 nm	
Alternative Cures*	
Iron-Doped Mercury Spot Lamp	> 2.5 min.
365nm LED Flood Lamp	> 2 min.
Pulsed Mercury Lamp	> 90 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 Products 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..
- Thermal post-cure beneficial - contact techserv@epotek.com for recommendations.

Product Description: EPO-TEK® OG154-1 is a single compound UV curable epoxy adhesive for the semiconductor, opto-electronics, medical, and scientific OEM industry. It is a replacement for EPO-TEK® OG154.

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) @ 5 rpm:**		26,000 - 34,000	cPs
Thixotropic Index:		N/A	
Glass Transition Temp:		128	°C (Dynamic Cure:20-200°C; Ramp -10-200°C @ 20°C/Min)
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	55	x 10^{-6} in/in°C
	Above Tg:	238	x 10^{-6} in/in°C
Shore D Hardness:		80	
Die Shear @ 23°C:		≥ 10 Kg	3,556 psi
Degradation Temp:		379	°C
Weight Loss:	**@ 200°C**	0.17	**%**
	@ 250°C	0.66	**%**
	@ 300°C	1.54	**%**
Suggested Operating Temperature:		< 300	°C (Intermittent)
Storage Modulus:		265,655	psi
* **Particle Size:**		N/A	

OPTICAL PROPERTIES @ 23°C:	
Spectral Transmission:	≥ 97% @ 500-1,660 nm
Refractive Index (uncured):	1.5561 @ 589 nm
Refractive Index (cured):	1.5692 @ 589 nm

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EPO-TEK® OG154-1 Advantages & Suggested Application Notes:

Advantages:

- Medium viscosity liquid adhesive commonly used for encapsulation and sealing applications
- Viscosity is optimal for syringe dispensing and by hand application
- Versatile cure capable of curing under both LED and mercury lamps, through broad spectrum mercury offers fast more complete cures

Suggested Applications:

- Chip on Board glob top encapsulation with adhesion to FR4 Kapton and ceramics
- Optoelectronic packaging and optics alignment with strong adhesion to glass and many
- High Tg

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