

**Date:** June 2017      **Rev:** VII  
**No. of Components:** Single  
**Mix Ratio by Weight:** N/A  
**Specific Gravity:** 1.17  
**Pot Life:** N/A  
**Shelf Life:** One year at room temperature

Recommended Cure	
Iron-Doped Mercury Flood Lamp 100 mW/cm <sup>2</sup> @ 240-365 nm	> 30 sec.
Alternative Cures*	
Iron-Doped Mercury Spot Lamp	> 60 sec.
365nm LED Flood Lamp	> 60 sec.
Pulsed Mercury Lamp	> 60 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..

**Product Description:** EPO-TEK® OG142 is a single component, UV curable epoxy, designed for adhesive, sealing, and encapsulating applications found in semiconductor, electro-optics, fiber optics, medical and scientific/OEM industries. It is a clear and colorless, high Tg 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:**

* <b>Color (before cure):</b>	Clear/Colorless	
* <b>Consistency:</b>	Pourable liquid	
* <b>Viscosity (23°C) @ 20 rpm:</b>	9,000 - 15,000 cPs	
<b>Thixotropic Index:</b>	N/A	
* <b>Glass Transition Temp:</b>	≥ 95 °C (Dynamic Cure:20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min)	
<b>Coefficient of Thermal Expansion (CTE):</b>		
	<b>Below Tg:</b>	56 x 10 <sup>-6</sup> in/in°C
	<b>Above Tg:</b>	189 x 10 <sup>-6</sup> in/in°C
<b>Shore D Hardness:</b>	86	
<b>Die Shear @ 23°C:</b>	≥ 4 Kg	1,422 psi
<b>Degradation Temp:</b>	421 °C	
<b>Weight Loss:</b>	<b>@ 200°C</b>	0.20 %
	<b>@ 250°C</b>	0.49 %
	<b>@ 300°C</b>	1.06 %
<b>Suggested Operating Temperature:</b>	< 300 °C (Intermittent)	
<b>Storage Modulus:</b>	558,079 psi	

**OPTICAL PROPERTIES @ 23°C:**

<b>Spectral Transmission:</b>	≥ 97% @ 660 - 1,640 nm
	≥ 92% @ 440 - 620 nm
<b>Refractive Index (uncured):</b>	1.5649 @ 589 nm
<b>Refractive Index (cured):</b>	1.5809 @ 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.

**EPO-TEK® OG142 Advantages & Suggested Application Notes:**

- Semiconductor:
  - ◇ Medium viscosity glob top encapsulant over IC's and wire bonds. It can be potted into cavities, or around die that utilize a dam or ring.
  
- Optics:
  - ◇ Adhesion to all types of glasses, Lexan polycarbonate, and many more plastics and laminates.
  - ◇ Adhesive in the beam-pathway; capable of transmitting light from 400 to 2000 nm range.
  - ◇ Encapsulant over LED devices and IR-LEDs.
  - ◇ Bonding beam splitter cubes and prisms together.
  
- LCD:
  - ◇ Primary gasket seal around LCD/Display's glass "sandwich" before the vacuum transfer filling method of VAN-
  - ◇ A plug seal after the LC process, whereby it does not harm the LC itself.
  
- OLED's:
  - ◇ Encapsulation over OLED microdisplay, as well as adhesive for glass lid-attach.

**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.**