

## Product Information Sheet

### EPO-TEK® UD1824

**Date:** September 2019 **Rev:** V

**Material Description:** EPO-TEK® UD1824 is single component, low viscosity, UV curable epoxy for adhesive sealing and encapsulating fiber optic and optoelectronic packaging applications.

**Number of Components:** Single  
**Mix Ratio by Weight:** N/A  
**Specific Gravity:** 1.16  
**Pot Life:** N/A  
**Shelf Life- Bulk:** One year refrigerated  
**Shelf Life- Syringe:** Six months refrigerated

Recommended Cure	
<b>Iron-Doped Mercury Flood Lamp</b> <i>100 mW/cm<sup>2</sup> @ 240-365 nm</i>	<b>&gt; 2 min.</b>
Alternative Cures*	
Iron-Doped Mercury Spot Lamp	> 14 min.
365nm LED Flood Lamp	> 10 min.
Pulsed Mercury Lamp	> 2 min.
<b>UV Cure is complete after 24 hours from UV Exposure</b>	
* 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) may vary from those stated below when syringe packaging and/or post-processing is required.

**MATERIAL CHARACTERISTICS:** *Cure condition: Varies as required \*Testing on lot acceptance basis Data below is not guaranteed. To be used as a guide only, not as a specification. Different batches, conditions and applications yield differing results.*

**PHYSICAL PROPERTIES:**

<b>* Color (before cure):</b>	Clear/Colorless		
<b>* Consistency:</b>	Pourable liquid		
<b>* Viscosity (23°C) @100 rpm:</b>	300 - 900 cPs		
<b>Thixotropic Index:</b>			
<b>* Glass Transition Temp:</b>	≥ 170 °C (Dynamic Cure:20-200°C/ISO 25 Min; Ramp -10-225°C @ 20°C/Min)		
<b>Coefficient of Thermal Expansion (CTE):</b>			
	<b>Below Tg:</b>	54 x 10 <sup>-6</sup> in/in°C	
	<b>Above Tg:</b>	131 x 10 <sup>-6</sup> in/in°C	
<b>Shore D Hardness:</b>	82		
<b>Lap Shear @ 23°C:</b>	N/A		
<b>Die Shear:</b>			
UV Cure	16.4 Kg	5,831 psi	
UV Cure + 80°C/1 hour	16.5 Kg	5,867 psi	
<b>Degradation Temp:</b>	374 °C		
<b>Weight Loss:</b>	<b>@ 200°C</b>	0.07 %	
	<b>@ 250°C</b>	0.23 %	
	<b>@ 300°C</b>	0.85 %	
<b>Suggested Operating Temperature:</b>	< 300 °C (Intermittent)		
<b>Storage Modulus:</b>	162,007 psi		
<b>Particle Size:</b>	N/A		

**OPTICAL PROPERTIES @ 23°C:**

<b>Spectral Transmission:</b>	≥ 99% @ 420 - 1,680 nm
<b>Index of Refraction:</b>	1.5079 @ 589 nm

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.