



## Preliminary Product Information Sheet

*(Note: These are typical properties to be used as a guide only, not a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results.)*

**MATERIAL ID:** **EPO-TEK®U300-2**  
**Date:** 01/2009 **Per:**  
**Rev:** VII  
**Material Description:** Liquid underfill encapsulant. NASA approved, low outgassing epoxy –  
 http://outgassing.nasa.gov.  
**Number of Components:** Two  
**Mix Ratio:** 10:1  
**Cure Schedule (minimum)** 150°C/60 Minutes - 120°C/90 Minutes - 80°C/3 Hours  
**Specific Gravity:** --- Part A: 1.20 Part B: 1.10  
**Pot Life:** 2 Days  
**Shelf Life:** One year at room temperature

*NOTE:* Container(s) should be kept closed when not in use. Filled systems should be stirred thoroughly before mixing and prior to use.

### MATERIAL CHARACTERISTICS:

<b>PHYSICAL PROPERTIES:</b>			
<b>Color (before cure):</b>	Part A: Clear/Colorless	Part B: Amber	
<b>Consistency:</b>	Pourable liquid	<b>Die Shear @ 23°C:</b>	<b>Kg</b>
<b>Viscosity (23°C):</b> @ 20 rpm	4,751 cPs	<b>Degradation Temp:</b>	425 °C
<b>Thixotropic Index:</b>		<b>Weight Loss:</b>	
<b>Glass Transition Temp:</b>	127 °C	@ 200°C:	< 0.05 %
		@ 250°C:	< 0.05 %
		@ 300°C:	0.15 %
<b>Coefficient of Thermal Expansion (CTE):</b>		<b>Operating Temp:</b>	
Below Tg:	55 x 10 <sup>-6</sup> in/in°C	Continuous:	- 55°C to + 225°C
Above Tg:	184 x 10 <sup>-6</sup> in/in°C	Intermittent:	- 55°C to + 325°C
<b>Shore D Hardness:</b>		<b>Storage Modulus @ 23°C:</b>	268,482 psi
<b>Lap Shear @ 23°C:</b>	psi	<b>Particle Size:</b>	N/A

  

<b>ELECTRICAL AND THERMAL PROPERTIES:</b>			
<b>Thermal Conductivity:</b>	<b>W/mK</b>	<b>Dielectric Constant (1KHz):</b>	
<b>Volume Resistivity @ 23°C:</b>	<b>Ohm-cm</b>	<b>Dissipation Factor (1KHz):</b>	

  

<b>OPTICAL PROPERTIES @ 23°C:</b>			
<b>Spectral Transmission:</b>	% @	nm	<b>Refractive Index (uncured):</b>
	% @	nm	@ 589 nm

The data above is INITIAL only - it may be changed at anytime, for any reason without notice to anyone. It is provided only as a guide for evaluation/consideration.

\*These material characteristics are typical properties that are based on a limited number of samples/batches. All properties are based on the cure indicated above. Some properties may vary as manufactured quantities are scaled up to commercialized production levels.

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