

**Preliminary Product Information Sheet**

**MATERIAL ID:** EPO-TEK® EK2000

**Date:** Aug 2012

**Rev:** III

**Material Description:** A two component, silver-filled adhesive that exhibits exceptional thermal and electrical conductivity along with a shiny silver appearance making it ideal for the demanding requirements of high power LED die attach applications. Other benefits include low viscosity and high thixotropy making it suitable for a wide range of application techniques. It is a two component version of EPO-TEK® EK1000.

**Number of Components:** Two  
**Mix Ratio by Weight:** 1 : 1  
**Cure Schedule (minimum):** 200°C/30 Minutes  
**Recommended Cure:** 150°C/1 Hour + 200°C/1 Hour (post-cure)  
**Specific Gravity:** Part A: 3.82 Part B: 3.88  
**Pot Life:** 2 Weeks **Dry Time:** < 1 Day  
**Shelf Life:** One year refrigerated upon arrival

*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:**

**PHYSICAL PROPERTIES:**

<b>Color (before cure):</b>	Part A: Silver	Part B: Silver	
<b>Consistency</b>	Smooth thixotropic paste		
<b>Viscosity (23°C): @ 100 rpm</b>	1,686 cPs		
<b>Thixotropic Index:</b>	3.6		
<b>Glass Transition Temp:</b>	104 °C		
<b>Coefficient of Thermal Expansion (CTE):</b>			
<b>Below Tg:</b>	38 x 10 <sup>-6</sup> in/in°C		
<b>Above Tg:</b>	94 x 10 <sup>-6</sup> in/in°C		
<b>Shore D Hardness:</b>	66		
<b>Lap Shear @ 23°C:</b>	1,010 psi		
<b>Die Shear @ 23°C - initial</b>	>10 Kg	3,400 psi	
<b>Die Shear @ 23°C - after 1000 hrs 85C/85%R</b>	>5 Kg	1,700 psi	
<b>Degradation Temp:</b>	357 °C		
<b>Weight Loss:</b>			
@ 200°C	0.19 %		
@ 250°C	0.94 %		
@ 300°C	1.70 %		
<b>Operating Temp:</b>			
<b>Continuous:</b>	- 55°C to	200 °C	
<b>Intermittent:</b>	- 55°C to	300 °C	
<b>Storage Modulus:</b>	273,528 psi		
<b>Ion Content:</b>			
<b>Cl:</b>	< 10 ppm	<b>NA<sup>+</sup>:</b>	2 ppm
<b>NH<sub>4</sub><sup>+</sup>:</b>	6 ppm	<b>K<sup>+</sup>:</b>	0 ppm
<b>Particle Size:</b>	≤ 45 microns		

**ELECTRICAL AND THERMAL PROPERTIES:**

<b>Thermal Conductivity (150°C/1 Hr)</b>	12.6 W/mK
<b>Thermal Conductivity (150°C/1 Hour + 200°C/1 Hour):</b>	26.3
<b>Volume Resistivity:</b>	≤ 0.00009 Ohm-cm

**OPTICAL PROPERTIES @ 23°C:**

<b>Spectral Transmission:</b>	N/A
<b>Index of Refraction:</b>	N/A

**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.**