

## Product Information Sheet

**MATERIAL ID:**

**EPO-TEK® EE112-1**

**Date:** 12/2008

**Per:**

**Rev:** IV

**Material Description:**

A two component, electrically conductive epoxy adhesive for PCB level and opto-electronic packaging applications. It is a flexible alternative to EPO-TEK® E415G and is suggested for LCD circuit assembly and other low stress ECA applications.

**Number of Components:**

Two

**Mix Ratio by weight:**

1:1

**Cure Schedule (minimum)**

80°C/1 Hour

**Specific Gravity:**

--- Part A: 3.28 Part B: 3.62

**Pot Life:**

1 Hour

**Shelf Life:**

Eight months 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:** *To be used as a guide only, not as a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results; Cure condition: 80°C/1 Hour*  
 \* denotes test on lot acceptance basis

<b>PHYSICAL PROPERTIES:</b>			
<b>*Color (before cure):</b>	Part A: Silver Part B: Silver	<b>Weight Loss:</b>	
<b>*Consistency:</b>	Smooth thixotropic paste	<b>@ 200°C:</b>	0.37 %
<b>*Viscosity (23°C):</b>		<b>@ 250°C:</b>	0.70 %
<b>@ 20 rpm</b>	8,000 - 20,000 cPs	<b>@ 300°C:</b>	1.35 %
<b>Thixotropic Index:</b>	2.5	<b>Operating Temp:</b>	
<b>*Glass Transition Temp:</b>	≤ 30 °C (Ramp 20°C/min to 200°C /ISO 25 Min; Ramp -40—200°C @ 20°C/Min)	<b>Continuous:</b>	- 55°C to + 150°C
<b>Coefficient of Thermal Expansion (CTE):</b>		<b>Intermittent:</b>	- 55°C to + 250°C
<b>Below Tg:</b>	79 x 10 <sup>-6</sup> in/in°C	<b>Storage Modulus @ 23°C:</b>	7,314 psi
<b>Above Tg:</b>	199 x 10 <sup>-6</sup> in/in°C	<b>Ion Content:</b>	
<b>Shore A Hardness:</b>	69	<b>Cl<sup>-</sup>:</b>	322 ppm
<b>Lap Shear @ 23°C:</b>	< 200 psi	<b>NH<sub>4</sub><sup>+</sup>:</b>	24 ppm
<b>Die Shear @ 23°C:</b>	≥ 1.5 Kg / 510 psi	<b>Na<sup>+</sup>:</b>	13 ppm
<b>Degradation Temp:</b>	328 °C	<b>K<sup>+</sup>:</b>	1 ppm
		<b>*Particle Size:</b>	≤ 45 microns
<b>ELECTRICAL AND THERMAL PROPERTIES:</b>			
<b>Thermal Conductivity:</b>	3.2 W/mK	<b>Dielectric Constant (1KHz):</b>	N/A
<b>*Volume Resistivity @ 23°C:</b>	≤ 0.0006 Ohm-cm	<b>Dissipation Factor (1KHz):</b>	N/A
<b>OPTICAL PROPERTIES @ 23°C:</b>			
<b>Spectral Transmission:</b>	N/A	<b>Index of Refraction:</b>	N/A

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