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## E3013 Electrically Conductive Adhesive (preliminary)

### **Description:**

TechFilm E3013 is a liquid one component adhesive that is specially formulated for bonding to gold or gold plated, nickel, and copper substrates. TechFilm E3013 will cure at temperatures above 120°C.

### **Applications:**

TechFilm E3013 is a liquid adhesive that is designed for giving high strength bonds to difficult to bond metal surfaces.

### **Shelf Life:**

6 months at -40°C or 21 days at room temperature

### **Cure Schedules:**

Cure Schedule: 30 min. @ 150°C  
Alternate Cure Schedules: 15 min. @ 160°C or 4 hour at 120°C

### **Uncured Properties:**

<b><u>Property</u></b>	<b><u>Method</u></b>	<b><u>Value Obtained</u></b>
Viscosity at 25°C, RV-TD, 1RPM, cP	TFTEST001B	780,000
Viscosity at 25°C, RV-TD, 10RPM, cP	TFTEST001B	300,000

### **Cured Properties:**

<b><u>Property</u></b>	<b><u>Method</u></b>	<b><u>Value Obtained</u></b>
Color	Visual	Silver
Specific Gravity	ASTMD 792	
Volume Resistivity at 25°C, Ohm-cm	TFTEST004B and MIL-STD-883	$6 \times 10^{-4}$
Thermal Conductivity, W/M-°K	ASTM E1461	1.0
Lap Shear Strength to Aluminum at 25°C, psi	ASTMD 1002	1650
Lap Shear Strength to Gold at 25°C, psi	ASTMD 1002	1460
Lap Shear Strength to Nickel at 25°C, psi	ASTMD 1002	1000
Glass Transition Temperature, °C, 10°C per minute	ASTME 1356	83
Weight Loss at 150°C, TGA, 20°C/min, N <sub>2</sub> , %	ASTMD 3850	0.10
at 200°C	and MIL-STD-883	0.15
at 250°C	Section 3.8.5.1	1.00

All values reported above are typical values from the recommended cure, and are reported as a means of reference. Individual testing should be done to determine actual results, tested at specific conditions.

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