



# Electro-Science Laboratories, Inc.

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## PLATINUM/PALLADIUM/SILVER CONDUCTOR

# 9565

ESL 9565 is a mixed-bonded ternary conductor material for general purpose conductor applications, which exhibits excellent solder leach resistance, excellent silver migration resistance, good solder wetting, and excellent initial and aged adhesion. ESL 9565 is recommended for use as a resistor termination.

When used with 4905-C multilayer dielectric, ESL 9565 is well suited as a top layer conductor with excellent adhesion, bond retention, and leach resistance.

### PASTE DATA

<b>RHEOLOGY:</b>	Thixotropic, screen printable paste
<b>VISCOSITY:</b> (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)	325±25 Pa·s
<b>BONDING MECHANISM:</b>	Mixed
<b>SHELF LIFE:</b> (25°C)	6 months

### PROCESSING

<b>SCREEN MESH/EMULSION:</b>	325/25 µm
<b>LEVELING TIME:</b> (25°C)	5-10 minutes
<b>DRYING AT 125°C:</b>	10-15 minutes
<b>FIRING RANGE:</b>	850°C-930°C
<b>OPTIMUM:</b>	850°C
<b>TIME AT PEAK:</b>	10-12 minutes
<b>RATE OF ASCENT/DESCENT:</b>	60°C-100°C/minute
<b>SUBSTRATE OF CALIBRATION:</b>	96% alumina
<b>THINNER:</b>	ESL 401

9565 9809-B

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See Caution and Disclaimer on other side.

## TYPICAL PROPERTIES

<b>FIRED THICKNESS:</b>	12.0±2.5 µm
<b>RESISTIVITY:</b>	24-36 mΩ/sq.
<b>PRINTING RESOLUTION:</b> (Line/Space)	250 µm x 250 µm
<b>SOLDER WETTABILITY:</b> (RMA flux, 5 sec. dip 62 Sn/36 Pb/2 Ag, 220°C±5°C)	Very good
<b>SOLDER LEACH:</b> (No. of 10 sec. dips to double resistance of 0.25 mm wide x 100 mm long conductor 62 Sn/36 Pb/2 Ag, 220°C±5°C)	5
<b>ADHESION:</b> (90° pull, 2.0 mm x 2.0 mm pads, 62 Sn/36 Pb/2 Ag)	
<b>Initial pull strength:</b>	60 N
<b>Aged 48 hours at 150°C:</b>	49 N
<b>ULTRASONIC WIRE BOND:</b> (25 µm Al wire)	
<b>Initial</b>	5.5-5.8 grams
<b>Aged 48 hours at 150°C:</b>	3.6-4.0 grams
<b>THERMOSONIC WIRE BOND:</b> (25 µm Au wire)	
<b>Initial:</b>	4.0-4.8 grams

9565 9809-B

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**CAUTION:** Proper industrial safety precautions should be exercised in using these products. Use with adequate ventilation. Avoid prolonged contact with skin or inhalation of any vapors emitted during use or heating of these compositions. The use of safety eye goggles, gloves or hand protection creams is recommended. Wash hands or skin thoroughly with soap and water after using these products. Do not eat or smoke in areas where these materials are used. Refer to appropriate MSDS sheet.

**DISCLAIMER:** The product information and recommendations contained herein are based on data obtained by tests we believe to be accurate, but the accuracy and completeness thereof is not guaranteed. No warranty is expressed or implied regarding the accuracy of these data, the results obtained from the use hereof, or that any such use will not infringe any patent. Electro-Science assumes no liability for any injury, loss, or damage, direct or consequential arising out of its use by others. This information is furnished upon the condition that the person receiving it shall make their own tests to determine the suitability thereof for their particular use, before using it. User assumes all risk and liability whatsoever in connection with their intended use. Electro-Science's only obligation shall be to replace such quantity of the product proved defective.

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