



## ESL ELECTROSCIENCE

CERAMIC TAPES &  
THICK-FILM MATERIALS

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# CERMET SILVER/PLATINUM CONDUCTOR

# 9598

## Platinum Silver Conductor designed for Excellent Leach Resistance

ESL 9598 is a platinum silver conductor specially formulated for high leach resistance. The material withstands at least 20 ten second dips using 63/37 Sn/Pb solder when fired at 930°C. It exhibits a printing definition of 250 micrometers lines and spaces, and initial adhesion greater than 3.5 kg on 96% alumina.

### PASTE DATA

<b>Rheology:</b>	Thixotropic, screen-printable paste
<b>Viscosity:</b> (Brookfield RVT, 10 rpm, ABZ spindle, 25.5 ± 0.5 °C)	300 ± 30 Pa.s
<b>Bonding Mechanism:</b>	Mixed-bonded
<b>Shelf Life (20 - 25 °C):</b>	6 months

### PROCESSING

<b>Screen Mesh, Emulsion:</b>	325 S/S, 33 µm
<b>Levelling Time (at 20°C):</b>	5 - 10 min
<b>Drying Time (at 125°C):</b>	10 - 15 min
<b>Firing Temperature Range:</b>	850 - 930°C
	Optimum: 930°C
	Time at peak: 10 - 12 min
<b>Rate of Ascent/Descent:</b>	60 - 100°C / min
<b>Substrate for Calibration:</b>	96% alumina
<b>Thinner:</b>	ESL 401

ESL Europe (KOP) 9598 9904-C

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See Caution and Disclaimer on page 2.

## TYPICAL PROPERTIES

**Fired Thickness:** 10 - 18  $\mu\text{m}$   
(at least 2 layers 96% alumina)

**Resistivity:** (15  $\mu\text{m}$ )  $\leq 80 \text{ m}\Omega/\text{sq.}$

**Printing Resolution:** 0.250 mm / 0.250 mm  
(line/space)

**Solder Wettability:** Excellent  
(RMA Flux, 5 sec. dip, 62Sn/36Pb/2Ag, 220°C)

**Solder Leach:**  $\geq 20$  dips  
(No. of 10 sec. dips to double lowest resistance of  
100 mm x 0.25 mm conductor, 62Sn/36Pb/2Ag, 220°C)

**Adhesion:**  
(90° Pull, 2 mm x 2 mm pads, 62Sn/36Pb/2Ag)

Initial pull strength:  $\geq 3.5 \text{ kg}$   
Aged 48 hours at 150°C:  $\geq 1.8 \text{ kg}$

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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 vapours 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. ElectroScience 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 his own tests to determine the suitability thereof for his particular use, before using it. User assumes all risk and liability whatsoever in connection with his intended use. ElectroScience's only obligation shall be to replace such quantity of the product proved defective.

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