



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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CERMET SILVER/PLATINUM CONDUCTOR **9597-G**

Lead, Cadmium and Nickel-Free*

ESL 9597-G is a silver/platinum conductor that can be fired on alumina using a wide temperature range. This conductor may be printed onto other substrates including beryllia, glass and Porcelain Enamelled Steel (PES). Its ability to adhere to glass makes it suitable for printing through laser drilled holes in ceramic substrates. 9597-G is a non-migrating conductor with exceptional solder leach resistance and can be used to replace Pt/Au in some applications.

PASTE DATA

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

PROCESSING

Screen Mesh, Emulsion:	325 S/S, 20 µm
Levelling Time (at 20°C):	5 - 10 min
Drying Time (at 125°C):	10 - 15 min
Firing Temperature Range:	550 - 980°C in air
	Optimum: 850°C
	Time at peak: 10 min
Total Firing Cycle:	1 hour
Substrate for Calibration:	96% alumina
Thinner:	ESL 401

ESL Europe 9597-G 0410-A

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See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

Fired Thickness: 12.5 ± 2.5 µm
(measured on a 2 mm x 2 mm pad on 96% alumina)

Approximate Coverage: 90 - 100 cm²/g

Resistivity: ≤30 mΩ/□
(measured on a 100 mm x 0.25 mm conductor track at 12.5 µm fired thickness)

Printing Resolution: 0.125 mm / 0.125 mm
(line/space)

Solder Wettability: 95 - 100%
(RMA flux, 5 sec. dip, 62Sn/36Pb/2Ag, 220°C)

Solder Leach: >10 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: 5.0 - 9.0 kg
Aged 48 hours at 150°C: 3.8 - 6.5 kg

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*None of the six substances referred to in the RoHS Directive (2002/95/EC) are used in the formulation of this product.

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.

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