



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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CERMET SILVER / PALLADIUM / PLATINUM CONDUCTOR

9562-G

Cadmium, Lead and Nickel-Free*

ESL 9562-G is a low-cost, ternary conductor that has excellent wire bonding characteristics with large diameter aluminium wire as well as gold wire. This conductor exhibits excellent conductivity, adhesion and solderability, and can be used as an economical conductor in automotive and consumer applications. The 9562-G may be protected with 850°C firing ESL 4924 overglaze.

PASTE DATA

Rheology:	Thixotropic screen-printable paste
Viscosity: (Brookfield RVT, 10rpm, ABZ Spindle, 25.5 ± 0.5 °C)	185 ± 25 Pa.s
Bonding Mechanism:	MICRO-LOK®
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:	850 - 930°C in air
	Optimum: 850°C
	Time at peak: 10 min
Total Firing Cycle:	30 min
Substrate for Calibration:	96% alumina
Thinner:	ESL 401

ESL Europe 9562-G 0601-D

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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 - 110 cm²/g

Resistivity:
(measured on a 100 mm x 0.25 mm
conductor track at 12.5 µm fired thickness) < 4.0 mΩ/□

Printing Resolution:
(line/space) 0.150 mm / 0.150 mm

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

Solder Leach:
(No. of 10 sec. dips to double lowest resistance of
100 mm x 0.25 mm conductor, 62Sn/36Pb/2Ag, 220°C) > 5 dips

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

Initial pull strength: > 7.0 kg
Aged 48 hours at 150°C: > 6.0 kg

Ultrasonic Al Wire Bond:
(250 µm wire; bond length 4 mm) > 600 g

Aged Al Wire Bond:
(48 hours at 150°C) > 500 g

Thermosonic Au Wire Bond:
(25 µm wire; bond length 1 mm;
100% wire breaks) > 7 g

Aged Au Wire Bond:
(24 hours at 200°C) > 7 g

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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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