



## ESL ELECTRO-SCIENCE

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

<b>Rheology:</b>	Thixotropic screen-printable paste
<b>Viscosity:</b> (Brookfield RVT, 10rpm, ABZ Spindle, 25.5 ± 0.5 °C)	185 ± 25 Pa.s
<b>Bonding Mechanism:</b>	MICRO-LOK®
<b>Shelf Life (20 - 25 °C):</b>	6 months

### PROCESSING

<b>Screen Mesh, Emulsion:</b>	325 S/S, 20 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 in air
	Optimum: 850°C
	Time at peak: 10 min
<b>Total Firing Cycle:</b>	30 min
<b>Substrate for Calibration:</b>	96% alumina
<b>Thinner:</b>	ESL 401

ESL Europe 9562-G 0601-D

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See Caution and Disclaimer on other side.

## TYPICAL PROPERTIES

<b>Fired Thickness:</b> (measured on a 2 mm x 2 mm pad on 96% alumina)	12.5 ± 2.5µm
<b>Approximate Coverage:</b>	90 - 110 cm <sup>2</sup> /g
<b>Resistivity:</b> (measured on a 100 mm x 0.25 mm conductor track at 12.5 µm fired thickness)	< 4.0 mΩ/□
<b>Printing Resolution:</b> (line/space)	0.150 mm / 0.150 mm
<b>Solder Wettability:</b> (RMA Flux, 5 sec. dip) (62Sn/36Pb/2Ag, 220°C)	100%
<b>Solder Leach:</b> (No. of 10 sec. dips to double minimum resistance of 100 mm x 0.25 mm conductor, 62Sn/36Pb/2Ag, 220°C)	> 5 dips
<b>Adhesion:</b> (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
<b>Ultrasonic Al Wire Bond:</b> (250µm wire; bond length 4.0 mm)	> 600 g
<b>Aged Al Wire Bond:</b> (48 hours at 150°C)	> 500 g
<b>Thermosonic Au Wire Bond:</b> (25µm wire; bond length 1mm; 100% wire breaks)	> 7 g
<b>Aged Au Wire Bond:</b> (24 hours at 200°C)	> 7 g

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\*Complies with RoHS, ELV, WEEE and CHIP 3 EC directives.

**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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