



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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CERMET SILVER/PLATINUM CONDUCTOR 9512-G

RoHS Compliant*

ESL 9512-G is a newly developed silver/platinum conductor, which can also be used as an interconnect paste in SOFC and other fuel cells. It exhibits excellent conductivity, adhesion to 96% alumina and tape-cast materials, and solder leach resistance. It is compatible with 4920 dielectric and tape-cast materials that are similarly free of alkali ions and the above metals.

PASTE DATA

Rheology:	Thixotropic screen-printable paste
Viscosity: (Brookfield RVT, 10rpm, ABZ Spindle, 25.5 ± 0.5 °C)	250 ± 25 Pa.s
Bonding Mechanism:	Mixed
Shelf Life (20 - 25 °C):	6 months

PROCESSING

Screen Mesh, Emulsion:	325 S/S, 25 µm
Levelling Time (at 20 °C):	5 - 10 min
Drying Time (at 125 °C):	10 - 15 min
Firing Temperature:	Optimum: 850 °C Time at peak: 10 - 12 min
Total Firing Cycle:	50 min
Substrate for Calibration:	96% alumina
Thinner:	ESL 401

ESL Europe (KOP) 9512-G 0403-A

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See Caution and Disclaimer on page 2.

TYPICAL PROPERTIES

Fired Thickness: 10 - 15 µm

Resistivity:
(at 12.5 µm fired thickness) < 4.0 mΩ/□

Printing Resolution:
(line/space) 0.075 mm / 0.075 mm

Solder Wettability:
(RMA Flux, 5 sec. dip
62Sn/36Pb/2Ag, 220°C) >95% Coverage

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

Adhesion:
(90° pull, 2 mm x 2 mm pads, 62Sn/36Pb/2Ag, 220°C)

Initial pull strength: > 7.0 kg
Aged 200 hours at 150°C: > 7.0 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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