



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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CERMET SILVER/PLATINUM CONDUCTOR 9501-C

ESL 9501-C is a low-cost, high-speed printing conductor material exhibiting high-conductivity and excellent adhesion and solderability. 9501-C may be used on a variety of substrates including beryllia, ferrite and 99.5% alumina and is compatible with all ESL 850°C firing resistors.

PASTE DATA

Rheology:	Thixotropic, screen-printable paste
Viscosity: (Brookfield RVT, 10rpm, ABZ Spindle, 25.5 ± 0.5 °C)	225 ± 25 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:	850 - 930°C in air
	Optimum: 850°C
	Time at peak: 10 min
Rate of Ascent/Descent:	50 - 60 °C / min
Substrate for Calibration:	96% alumina
Thinner:	ESL 401

ESL Europe 9501-C 9711-B

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See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

Fired Thickness: 10.5 ± 2.5 µm
(measured on a 2 mm x 2 mm pad on 96% alumina)

Approximate Coverage: 60 - 70 cm²/g

Resistivity: 2 - 4 mΩ/□
(measured on a 100 mm x 0.25 mm conductor track)

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

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

Solder Leach: ≥5 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 - 7 kg
Aged 48 hours at 150°C: 3 - 6 kg

Ultrasonic Al Wire Bond: 8 g
(25µm wire)

Thermosonic Au Wire Bond: 6 g
(25µm wire)
20 - 30 g
(50µm wire)

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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.

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