



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

416 EAST CHURCH ROAD
KING OF PRUSSIA, PA 19406-2625, U.S.A

T: 610-272-8000
F: 610-272-6759

www.electroscience.com

CONDUCTIVE ELECTRODE MATERIAL

9916

Silver Based Conductor Designed for use with the 4150 Series and 4200-C Series of Dielectrics

ESL 9916 is a silver based conductor specially developed for use as an electrode with 4150 Series and 4200-C Series of dielectrics. ESL 9916 may also be used with the 4100 Series of dielectrics. When used with ESL 4150 Series and 4200-C Series dielectrics, this conductor provides the optimum performance of the systems. The typical properties of these conductors were derived from printing and firing directly on alumina.

PASTE DATA

Rheology:	Thixotropic, screen printable paste
Viscosity: (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5 ± 0.5°C)	200 ± 25 Pa.s
Shelf Life: (25°C)	6 months

PROCESSING

Screen Mesh/Emulsion:	325/25 µm
Leveling Time: (25°C)	5-10 minutes
Drying at 125°C:	10-15 minutes
Firing Temperature Range:	850°C-900°C
Optimum:	900°C
Time at Peak:	10 minutes
Rate of Ascent/Descent:	60 - 100 °C/minute
Substrate of Calibration:	96% alumina
Thinner:	ESL 401 or 413

ESL Europe (KOP) 9916 9903-New

ESL Affiliates

ESL Europe (Agmet Ltd) • 8 Commercial Road • Reading • Berkshire • England • RG2 0QZ • Tel: +44 (0) 118 918 2400 • Fax: +44 (0) 118 986 7331 • Sales@ESLEurope.co.uk

ESL Nippon • Sukegawa Bldg. • 6th floor • 3-4 Yanagibashi 1-chome • Taito-ku • Tokyo 111, Japan • Tel: +81-3-3864-8521 • Fax: +81-3-3864-9270 • Sales@ESL-Nippon.co.jp

ESL China • Room #1707, Tower A, City Center of Shanghai • 100 Zunyi Road • Shanghai, China 200051 • Tel: +86-21-6237-0336 and 0337 • Fax: +86-21-6237-0338
ESLChina@eslshanghai.net

See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

Fired Thickness:	12.5 ± 2.5 µm
Printing Resolution: (Line/Space)	125 µm / 125 µm
Resistivity:	≤ 2.0 mΩ/sq.
Solder Leach: (No. of 10 sec. dips to double resistance of 0.25 mm wide x 100 mm long conductor, 62 Sn/36 Pb/2 Ag, 220 ± 5 °C)	≥ 7
Adhesion: (90° pull, 2.0 mm x 2.0 mm pads, 62 Sn/36 Pb/2 Ag, 220 ± 5 °C)	
Initial pull strength:	≥ 8.2 kg
Aged 48 hours at 150°C:	≥ 6.6 kg

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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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