



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

9516

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

ESL 9516 is a platinum silver based conductor specially developed for use as an electrode with 4150 Series and 4200-C Series of dielectrics. ESL 9516 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 - 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) 9516 9911-A

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: | ≤ 3.2 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) | ≥ 10 |
| Adhesion: (90° pull, 2.0 mm x 2.0 mm pads, 62 Sn/36 Pb/2 Ag, 220 ±5 °C) | |
| Initial pull strength: | ≥ 7.6 kg |
| Aged 48 hours at 150°C: | ≥ 5.1 kg |

ESL Europe (KOP) 9516 9911-A

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.

DISCLAIMER: The product information and recommendations contained herein are based on data obtained by tests we believe to be accurate, but the accuracy and completeness thereof is not guaranteed. No warranty is expressed or implied regarding the accuracy of these data, the results obtained from the use hereof, or that any such use will not infringe any patent. ElectroScience assumes no liability for any injury, loss, or damage, direct or consequential, arising out of its use by others. This information is furnished upon the condition that the person receiving it shall make his own tests to determine the suitability thereof for his particular use, before using it. User assumes all risk and liability whatsoever in connection with his intended use. ElectroScience's only obligation shall be to replace such quantity of the product proved defective.