



## ESL ELECTROSCIENCE

CERAMIC TAPES &  
THICK-FILM MATERIALS

416 EAST CHURCH ROAD  
KING OF PRUSSIA, PA 19406-2625 USA

T: 610.272.8000  
F: 610.272.6759

[www.electroscience.com](http://www.electroscience.com)

### CERMET SILVER CONDUCTOR

# 9907

### RoHS Compliant\* Conductor for use with Fuel Cells

ESL 9907 is a silver conductor designed to be used as a current collector for solid oxide fuel cells (SOFC). It can be screen-printed and is also available in syringes for dispensing.

#### PASTE DATA

<b>RHEOLOGY:</b>	Thixotropic, screen-printable paste
<b>VISCOSITY:</b> (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)	75 ± 25 Pa•s
<b>BONDING MECHANISM:</b>	Fritless
<b>COLOR:</b>	Grey
<b>SHELF LIFE:</b> (at 25°C)	6 months

#### PROCESSING

<b>SCREEN MESH/EMULSION:</b>	325 / 15-25 µm
<b>LEVELING TIME:</b> (25°C)	5-10 minutes
<b>DRYING AT 125°C:</b>	10-15 minutes
<b>FIRING TEMPERATURE:</b>	850°C
<b>TIME AT PEAK:</b>	10-12 minutes
<b>TOTAL FIRING CYCLE:</b>	45-60 minutes
<b>SUBSTRATE OF CALIBRATION:</b>	ESL 41010
<b>THINNER:</b>	ESL 401

9907 0912-A

#### ESL Affiliates

ESL China • Rm#1707, Tower A • City Center of Shanghai • 100 Zunyi Road • Shanghai, China 200051 Tel: (011-86)-21-62370336 • Fax: (011-86)-21-62370338 • [eslchina@eslshanghai.net](mailto:eslchina@eslshanghai.net)

ESL Europe • 8 Commercial Road • Reading, Berkshire, England RG2 0QZ • Tel: (011-44)-118-918-2400 • Fax: (011-44)-118-986-7331 • [Sales@ESLEurope.co.uk](mailto:Sales@ESLEurope.co.uk)

ESL Nippon • Sukegawa Bldg • 6<sup>th</sup> floor • 3-4 Yanagibashi 1-chome • Taito-ku • Tokyo 111, Japan • Tel: (011-81)-3-3864-8521 • Fax: (011-81)-3-3864-9270 • [Sales@ESL-Nippon.co.jp](mailto:Sales@ESL-Nippon.co.jp)

See Caution and Disclaimer on other side.

## TYPICAL PROPERTIES

**FIRED THICKNESS**

9-17  $\mu\text{m}$

**RESISTIVITY:**

(when normalized @ 20  $\mu\text{m}$  & co-fired with ESL 41010 tape)

$\leq 2 \text{ m}\Omega/\text{sq.}$

---

9907 0912-A

\* 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 vapors 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. Electro-Science 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 their own tests to determine the suitability thereof for their particular use, before using it. User assumes all risk and liability whatsoever in connection with their intended use. Electro-Science's only obligation shall be to replace such quantity of the product proved defective.

---