



## 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)

## SOLAR CELL SILVER ALUMINUM PASTE

# 9925-J

### Cadmium-Free, Low-Lead Photovoltaic Material

ESL 9925-J is a silver paste designed for the back-surface metallization of single crystal and polycrystalline silicon solar cells. The 9925-J is an aluminum-doped silver paste that contains a cadmium-free low-lead glass developed to promote a balance between ohmic contact, solderability, and adhesion.

The recommended materials to be used in conjunction with 9925-J are 9980 Series front-surface silver and 2590 Series back-surface aluminum metallizations.

### PASTE DATA

<b>RHEOLOGY:</b>	Thixotropic, screen printable paste
<b>VISCOSITY:</b> (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)	210±50 Pa·s
<b>SHELF LIFE:</b> (25°C)	6 months

### PROCESSING

<b>SCREEN MESH/EMULSION:</b>	180-325/15-25 µm
<b>LEVELING TIME:</b> (25°C)	5-10 minutes
<b>DRYING AT 125°C:</b>	10-15 minutes
<b>FURNACE SET POINT:</b>	840-910°C
<b>TIME ABOVE 600°C:</b>	typically 5-8 seconds
<b>THINNER:</b>	ESL 401 or ESL 413

Note: When used with the ESL 2590 Series materials, 9925-J should be printed first. The aluminum paste should be printed second so that it overlaps the silver but leaves an exposed silver pad. The materials can then be co-fired to provide a solderable contact pad.

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#### 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.

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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 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.

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