



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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SOLAR CELL SILVER ALUMINIUM PASTE

9925

Cadmium-Free, Low-Lead Photovoltaic Material

ESL 9925 is a silver paste designed for the back-surface metallization of single crystal and polycrystalline silicon solar cells. The 9925 is an aluminium-doped silver paste that contains a cadmium-free low-lead glass developed to promote a balance between ohmic contact, solderability, and adhesion. Excellent performance can be achieved over a wide processing window.

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

PASTE DATA

Rheology: Thixotropic screen-printable paste

Viscosity:
(Brookfield RVT, 10rpm,
ABZ Spindle, 25.5 ± 0.5 °C) 170 ± 50 Pa.s

Shelf Life (20 - 25 °C): 6 months

PROCESSING

Screen Mesh, Emulsion: 180 - 325 S/S, 15 - 25 µm

Levelling Time (at 20 °C): 5 - 10 min

Drying Time (at 125 °C): 10 - 15 min

Furnace Set Point: 840 - 910 °C
Time above 600 °C: typically 5 - 8 sec

Thinner: ESL 401 or 413

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

ESL Europe (KOP) 9925 1001-A

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See Caution and Disclaimer on page 2.

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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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