



# ESL Electro-Science

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## SILVER PLATINUM CONDUCTOR

# 953

### Lead-Free, Leach Resistant Conductor for Use as Top or Inner-Layer Electrode With Co-Fire Ceramic Tape

ESL 953 is a platinum silver conductor designed for use with ceramic tapes. It can be used with ESL co-fired tapes such as ESL 41020 and provides good adhesion and solderability. This conductor is not for use on 96% alumina substrates.

#### PASTE DATA

<b>RHEOLOGY:</b>	Thixotropic, screen printable paste
<b>VISCOSITY:</b> (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)	200±25 Pa·s
<b>BONDING MECHANISM:</b>	Fritted
<b>SHELF LIFE:</b> (at 25°C)	6 months

#### PROCESSING

<b>SCREEN MESH/EMULSION:</b>	325/25 µm
<b>LEVELING TIME:</b> (25°C)	5-10 minutes
<b>DRYING:</b> (at 80°C)	10-15 minutes
<b>FIRING:</b>	850°C 5°C/minute rise from room temperature to 425°C, soak for one hour then 5°C/minute rise from 425°C to 850°C, soak for 10 minutes, cool naturally
<b>SUBSTRATE OF CALIBRATION:</b>	ESL 41020 (six layers, pre-laminated)
<b>THINNER:</b>	ESL 401

953 0403 new

#### ESL Affiliates

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See Caution and Disclaimer on other side

## TYPICAL PROPERTIES

<b>FIRED THICKNESS (line)</b>	25 ± 3 μm
<b>RESISTIVITY:</b> (when co-fired with ESL 41020 tape)	≤ 6 mΩ/sq.
<b>PRINTING RESOLUTION:</b> (Line/Space)	250 μm x 250 μm
<b>ADHESION:</b> (2mm x 2mm pads)	≥ 20 N
<b>SOLDERABILITY:</b>	good

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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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