



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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GOLD CONDUCTOR

803

Conductor for Low Temperature Co-fired Ceramic Tapes

ESL 803 is a gold conductor paste specially developed for use with ESL low temperature co-fired ceramic tapes (LTCC). This material is designed for use as an inner layer or top layer metallization.

PASTE DATA

| | |
|---|-------------------------------------|
| RHEOLOGY: | Thixotropic, screen-printable paste |
| VISCOSITY: (Brookfield RVT, ABZ spindle, 10 rpm, 25.5 ± 0.5 °C) | 225 ± 50 Pa.s |
| SOLIDS CONTENT: | 77.0 ± 1.5 % |
| SHELF LIFE: (at 25 °C) | 6 months |

PROCESSING

| | |
|-----------------------------------|---------------------|
| SCREEN MESH/EMULSION: | 325 / 25 ± 12 µm |
| LEVELING TIME: (at 25°C) | 5 - 10 min |
| DRYING TIME: (at 80°C) | 10 -15 min |
| FIRING TEMPERATURE: | Co-fired with LTCC |
| RATE OF ASCENT/DESCENT: | 60°C - 100°C/minute |
| SUBSTRATE FOR CALIBRATION: | ESL 41010 |
| THINNER: | ESL 401 |

ESL Europe (KOP) 803 0904-A

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See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

| | |
|--|---|
| FIRED THICKNESS: (measured on a 2 mm x 2 mm pad) | 6 - 12 μm |
| RESISTIVITY: (measured on a 100 mm x 0.25 mm conductor track at 9 μm fired thickness) | $\leq 10 \text{ m}\Omega/\text{square}$ |
| SOLDER WETTABILITY: (80 Au / 20 Sn solder) | Good |
| WIREBONDABILITY: (25 μm Au wire) | |
| INITIAL PULL STRENGTH: | $\geq 10 \text{ grams}$ |
| ADHESION: (90° pull, 2.0 mm x 2.0 mm pads) | |
| INITIAL PULL STRENGTH: | $\geq 13 \text{ N}$ |

NOTES: All data was collected using ESL 41010 or similar tape, co-fired at 850°C.

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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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