PALLADIUM SILVER CONDUCTOR

RoHS Compliant* Conductor with Excellent Adhesion, Solderability, and Wirebondability

ESL 9647 is a palladium silver conductor with approximately a 3:1 Ag to Pd ratio. It is designed to have good initial adhesion and good thermal aging adhesion after an extended period of time at temperature. This conductor also has excellent large-diameter aluminum wirebondability. ESL 9647 is lead, cadmium, and nickel free.

PASTE DATA

RHEOLOGY: Thixotropic, screen-printable paste

VISCOSITY: (Brookfield RVT, ABZ spindle, 10 rpm, 25.5°C±0.5°C) 325±25 Pa·s

BONDING MECHANISM: Mix-bonded

SHELF LIFE: (25°C) 6 months

PROCESSING

SCREEN MESH/EMULSION: 325 mesh/25 μm

LEVELING TIME: (25°C) 5-10 minutes

DRYING: (125°C) 10-15 minutes

FIRING TEMPERATURE: 850°C

TIME AT PEAK TEMPERATURE: 10 minutes

RATE OF ASCENT/DESCENT: 60°C-100°C/minute

SUBSTRATE FOR CALIBRATION: 96% alumina

THINNER: ESL 413
## TYPICAL PROPERTIES

**FIRED THICKNESS:** 10±3 μm  
**RESISTIVITY:** ≤ 25 mΩ/sq.  
**PRINTING RESOLUTION:**  
(Line/space) 125 μm/125 μm  
**SOLDERABILITY:**  
(60/40 Sn/Pb solder, 250°C±5°C) Excellent  
**SOLDER LEACH RESISTANCE:**  
(60/40 Sn/Pb solder, 2.0 mm x 2.0 mm pads, 250°C±5°C, 10 sec. dip)  
| Number of dips | ≥ 2 |  
**PEEL ADHESION:**  
(60/40 Sn/Pb solder, 2.0 mm x 2.0 mm pads)  
| Initial | ≥ 20 N |  
| 1000 hours at 150°C | ≥ 18 N |  
**WIREBONDABILITY:**  
(250 μm Al wire, 100% wirebreaks)  
| ≥ 450 g |

* 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.  
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