ESL 9695 is a screen printable palladium silver conductor material featuring low-cost, excellent adhesion, good solderability, and high conductivity. ESL 9695 has a wide firing range, (625°C to 930°C), and can be used on porcelain enameled steel substrates as well as alumina.

PASTE DATA

RHEOLOGY: Thixotropic, screen printable paste

VISCOSITY: (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C) 225±25 Pa·s

BONDING MECHANISM: Mixed

SHELF LIFE: (25°C) 6 months

PROCESSING

SCREEN MESH/EMULSION: 325/25 µm

LEVELING TIME: (25°C) 5-10 minutes

DRYING AT 125°C: 10-15 minutes

FIRING RANGE:

OPTIMUM: (On alumina): 850°C

(On PES): 625°C

TIME AT PEAK: 10-12 minutes

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

SUBSTRATE OF CALIBRATION: 96% alumina

THINNER: ESL 401
TYPICAL PROPERTIES

FIRED THICKNESS: 12.5±2.5 µm
APPROXIMATE COVERAGE: 75-100 cm²/g
RESISTIVITY: 2-8 mΩ/sq.
PRINTING RESOLUTION: (Line/Space) 250 µm x 250 µm
SOLDER WETTABILITY:
(RMA flux, 5 sec, dip) 62 Sn/36 Pb/2 Ag, 220°C±5°C excellent
63 Sn/37 Pb, 250°C±5°C good
SOLDER LEACH:
(No. of 10 sec. dips to double the resistance of 0.25 mm wide x 100 mm long conductor, 62 Sn/36 Pb/2 Ag, 220°C±5°C) 2-5 dips
ADHESION:
(90° pull, 2.0 mm x 2.0 mm pads, 62 Sn/36 Pb/2 Ag) Initial pull strength: 50-60 N
Aged 48 hours at 150°C: 20-40 N
ULTRASONIC WIRE BOND:
(25 µm Al wire) 8-10 g

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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