Cadmium-free, High Speed Printing Palladium Silver

ESL 9694-SA is a cadmium-free high speed printing palladium silver conductor that exhibits excellent adhesion, good solderability, and high conductivity. The 9694-SA is also recommended for use with ESL R-300-P and R-300-C series resistors as a termination in trimmer and potentiometer applications.

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: 200-325/20-30 μm

LEVELING TIME: (25°C) 5-10 minutes

DRYING AT 125°C: 10-15 minutes

FIRING RANGE:
OPTIMUM: 750°C-930°C

TIME AT PEAK: 10-12 minutes

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

SUBSTRATE OF CALIBRATION: 96% alumina

THINNER: ESL 401 or 413

See Caution and Disclaimer on other side.
TYPICAL PROPERTIES

FIRED THICKNESS: 8-15 μm

RESISTIVITY:
(Measured on a 100 mm x 0.25 mm conductor track at 12.5 μm fired thickness) 2.0-5.0 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

SOLDER LEACH
(Number of 10 sec. dips to double the resistance of a 100 mm x 0.25 mm long conductor, 62 Sn/36 Pb/2 Ag, 220°C±5°C) ≥ 4 dips

ADHESION:
(90° pull, 2.0 mm x 2.0 mm pads, 62 Sn/36 Pb/2 Ag, 220°C±5°C)

Initial pull strength: ≥ 65 N

Aged 48 hours at 150°C: ≥ 35 N

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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