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CERMET SILVER CONDUCTOR

9912-THP

ESL 9912-THP is a mixed bonded silver paste especially developed for through-hole printing. The recommended firing temperature on 96% alumina is 850°C. This material also exhibits excellent solderability and solder leach resistance with 62 Sn/36 Pb/2 Ag solder on alumina.

PASTE DATA

RHEOLOGY:	Thixotropic, screen printable paste
VISCOSITY: (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)	45-55 Pa·s
BONDING MECHANISM:	Mixed bonded
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 TEMPERATURE:	850°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:	8-12 µm
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9912-THP 9702-B

ESL Affiliates

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See Caution and Disclaimer on other side.

APPROXIMATE COVERAGE:	75-100 cm ² /gram
RESISTIVITY:	1-3 mΩ/square
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)	good - very good
SOLDER LEACH: (Number of 10 sec. dips to double the resistance of a 0.25 mm wide x 100 mm long conductor, in 62 Sn/36 Pb/2 Ag solder, 220°C±5°C)	5-8
ADHESION: (90° pull, 2.0 mm x 2.0 mm pads, 62 Sn/36 Pb/2 Ag solder, 220°C±5°C)	
Initial pull strength:	60-90 N
Aged 48 hours:	60-80 N

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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.

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