



ESL Electro-Science

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GOLD CONDUCTOR

8884-G

Cadmium-Free, Lead-Free and Nickel-Free

ESL 8884-G is a newly developed gold conductor, which can also be used as an interconnect paste in SOFC and other fuel cells. It is a fritless gold paste that is designed to be used on 96% alumina and on tape-cast SOFC materials. It exhibits excellent wire bonding characteristics and, in addition to SOFC materials, can be used on ESL's cadmium, lead, and nickel-free dielectrics such as ESL 4920.

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:	Fritless
SHELF LIFE: (25°C)	6 months

PROCESSING

SCREEN MESH/EMULSION:	325/25-37 μm
LEVELING TIME: (25°C)	5-10 minutes
DRYING AT 125°C:	10-15 minutes
FIRING RANGE:	850°C-980°C
OPTIMUM:	850°C
TIME AT PEAK:	10-12 minutes
FIRING CYCLE:	45-60 minutes
RATE OF ASCENT/DESCENT:	60°C-100°C/minute
SUBSTRATE OF CALIBRATION:	96% alumina
THINNER:	ESL 413

8884-G 0403-B

ESL Affiliates

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See Caution and Disclaimer on other side

TYPICAL PROPERTIES

FIRED THICKNESS:	12.5±2.5 μm
RESISTIVITY: (12.5 μm fired thickness)	2-5 mΩ/sq.
ADHESION: (90° pull, 2.0 mm x 2.0 mm pads, 80% Au/20% Sn solder, 320°C±5°C reflow)	≥ 55 N
Ultrasonic WireBond: (25 μm Al wire)	
Initial:	≥ 15 g
Aged 48 hours at 150°C:	≥ 12 g
THERMOSONIC WIREBOND: (25 μm Au wire)	
Initial:	≥ 15 g
Aged 48 hours at 150°C:	≥ 10 g

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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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