



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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CERMET GOLD CONDUCTOR

8836-D

Fritless Gold For Use On Dielectric

ESL 8836-D is a fritless, 850°C firing gold conductor (MICRO-LOK[®]) that has been designed for use on 4905-CD dielectric. It exhibits excellent wire bond characteristics (38µm Al and 50µm Au) and is extensively used in multilayer systems.

PASTE DATA

Rheology:	Thixotropic, screen-printable paste
Viscosity: (Brookfield RVT, 10rpm, ABZ spindle, 25.5 ± 0.5 °C)	350 ± 25 Pa.s
Bonding Mechanism:	Fritless, MICRO-LOK [®]
Shelf Life (20 - 25 °C):	6 months

PROCESSING

Screen Mesh, Emulsion:	325 S/S, 20 µm
Levelling Time (at 20°C):	5 - 10 min
Drying Time (at 125°C):	10 -15 min
Firing Temperature Range:	850 - 1000°C in air
	Optimum: 850 °C
	Time at peak: 10 min
Total Firing Cycle:	1 hour
Substrate for Calibration:	96% alumina
Thinner:	ESL 401

ESL Europe 8836-D 0412-C

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See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

Fired Thickness: (measured on a 2 mm x 2 mm pad on 96% alumina)	9 - 14 μm
Approximate Coverage:	80 - 85 cm^2/g
Resistivity: (measured on a 100 mm x 0.25 mm conductor track)	< 4 $\text{m}\Omega/\square$
Printing Resolution: (line/space)	0.100 mm / 0.100 mm
Adhesion: (90° pull, 2 mm x 2 mm pads, 80Au/20Sn and 62Sn/36Pb/2Ag)	
	Initial pull strength: > 5.0 kg
	Aged 48 hours at 150°C: > 3.5 kg
Ultrasonic Al Wire Bond: (38 μm wire over 4905-CD, bond length 1 mm, 100% wire breaks)	> 16 g
Aged Al Wire Bond: (24 hours at 200°C; 100% wire breaks)	> 9 g
Thermosonic Au Wire Bond: (50 μm wire, over 4905-CD, bond length 1 mm, 100% wire breaks)	> 30 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 vapours 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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