



ESL ELECTRO-SCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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CERMET GOLD CONDUCTOR

8881-B

ESL 8881-B is a thin printing fritless (MICRO-LOK[®]) gold paste designed for use on 96% alumina substrates, or with 4905-C dielectric to give high coverage. The fired film exhibits strong adhesion to both bare alumina and 4905-C dielectric and may be easily etched using KI/I₂ solutions. Fired films of 8881-B are very dense with no center line depression and gives excellent line definition. 8881-B exhibits excellent wire bondability is a mixed-bonded, high conductivity gold material for use on alumina.

PASTE DATA

RHEOLOGY:	Thixotropic, screen printable paste
VISCOSITY : (Brookfield HBT, SC4-14 spindle, 10 rpm, 25.5°C±0.5°C)	250±25 Pa·s
BONDING MECHANISM:	MICRO-LOK [®]
SHELF LIFE: (at 20°C)	6 months

PROCESSING

SCREEN MESH / EMULSION:	325/25 μm
LEVELING TIME: (at 20°C)	5-10 minutes
DRYING AT 125°C:	10-15 minutes

4906 1401-D

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See Caution and Disclaimer on other side.

FIRING TEMPERATURE:

OPTIMUM: 850°C

TIME AT PEAK: 10 minutes

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

SUBSTRATE FOR CALIBRATION: 96% alumina

THINNER: ESL 413

TYPICAL PROPERTIES

FIRED THICKNESS: 6-8 µm

RESISTIVITY: (at 8 µm fired) ~ 3.5 mΩ/square

(at 7 µm fired) ~ 4.0 mΩ/square

PRINTING RESOLUTION:

(Line/Space) (325 mesh stainless steel) 75 µm x 75 µm

(Special Screen) 50 µm x 50 µm

THERMOSONIC GOLD WIREBONDING:

(25 µm gold wire) Initial After 48 hours at 150°C

(On bare 96% alumina) 14 grams 10 grams

(On 4905-C dielectric) 14 grams 10 grams

SOLDERED ADHESION:

(2 mm x 2 mm pads, 80 Au/20 Sn solder, on 96% alumina) 64 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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