ESL 8847 is a cermet gold paste designed for printing on 96% alumina substrates. The conductor exhibits excellent line definition, surface smoothness, printability and gold wire bonding properties.

PASTE DATA

RHEOLOGY: Thixotropic, screen-printable paste

VISCOSITY: (Brookfield 2xHBDVIII, CPE 52 cone, 10 sec⁻¹, 25°C to 26°C) 225±50 Pa·s

BONDING MECHANISM: Fritless

SHELF LIFE: (25°C) 6 months

PROCESSING

SCREEN MESH/EMULSION: 325/20 μm
400/25 μm

LEVELING TIME: (25°C) 5-10 minutes

DRYING AT 125°C: 10-15 minutes

FIRING: PEAK TEMPERATURE: 850°C
TIME AT PEAK: 10-15 min

TOTAL CYCLE TIME: 50 minutes

SUBSTRATE OF CALIBRATION: 96% alumina

THINNER: ESL 413
None of the six substances referred to in the RoHS Directive (2002/95/EC) are used in the formulation of this product.

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.

DISCLAIMER: The product information and recommendations contained herein are based on data obtained by tests we believe to be accurate, but the accuracy and completeness thereof is not guaranteed. No warranty is expressed or implied regarding the accuracy of these data, the results obtained from the use hereof, or that any such use will not infringe any patent. Electro-Science assumes no liability for any injury, loss, or damage, direct or consequential arising out of its use by others. This information is furnished upon the condition that the person receiving it shall make their own tests to determine the suitability thereof for their particular use, before using it. User assumes all risk and liability whatsoever in connection with their intended use. Electro-Science’s only obligation shall be to replace such quantity of the product proved defective.

TYPICAL PROPERTIES

FIRED THICKNESS: 8 ± 2 µm
RESISTIVITY (8 µm fired thickness): ≤ 5 mΩ/sq.
PRINTING RESOLUTION:
(Line/Space) 100 µm x 100 µm

THERMOSONIC WIRE BOND
(25µm Au Wire on alumina) Initial 1000 hrs @ 150°C Initial
≥ 8 g ≥ 6 g
(50 µm Au wire on alumina) Initial 1000 hrs @ 150°C Initial
≥ 40 g ≥ 35 g
(fired thickness ≥ 10µm)