



## ESL ELECTROSCIENCE

CERAMIC TAPES &  
THICK-FILM MATERIALS

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# CERMET GOLD CONDUCTOR

# 8835-1A

ESL 8835-1A is a mixed-bonded, high-conductivity gold material for use on alumina that gives excellent adhesion and is well suited for use as resistor terminations and for microwave applications. 8835-1A exhibits superior line definition.

The 8835-1A is an alloyed version of 8835-1B, and is designed to minimize the Al-Au intermetallic compound formed during elevated temperature aging of aluminium ultrasonic wire bonds.

## PASTE DATA

<b>Rheology:</b>	Thixotropic, screen-printable paste
<b>Viscosity:</b> (Brookfield RVT, 10rpm, ABZ spindle, 25.5 ± 0.5 °C)	300 ± 25 Pa.s
<b>Bonding Mechanism:</b>	Mixed-bonded
<b>Shelf Life (20 - 25 °C):</b>	6 Months

## PROCESSING

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

ESL Europe (KOP) 8835-1A 9710-D

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See Caution and Disclaimer on other side.

## TYPICAL PROPERTIES

<b>Fired Thickness:</b> (measured on a 2 mm x 2 mm pad on 96% alumina)	8 - 15 $\mu\text{m}$
<b>Approximate Coverage:</b>	55 - 70 $\text{cm}^2/\text{g}$
<b>Resistivity:</b> (measured on a 100 mm x 0.25 mm conductor track)	2 - 3 $\text{m}\Omega/\square$
<b>Printing Resolution:</b> (line/space)	0.100 mm / 0.100 mm
<b>Adhesion:</b> (90° pull, 2 mm x 2 mm pads, 80 Au/20Sn and 62Sn/36Pb/2Ag)	
	Initial pull strength: 3.8 - 7.0 kg
	Aged 48 Hours at 150°C: 2.5 - 6.0 kg
<b>Ultrasonic Al Wire Bond:</b> (25 $\mu\text{m}$ wire; Bond length 1 mm, 100% Wire breaks)	8 - 10 g
<b>Thermosonic Au Wire Bond:</b> (25 $\mu\text{m}$ wire; Bond length 1 mm, 100% Wire breaks)	6 - 9 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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