



## ESL ELECTROSCIENCE

CERAMIC TAPES &  
THICK-FILM MATERIALS

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# CERMET SILVER/PALLADIUM CONDUCTOR 9635-HG

## Cadmium, Lead & Nickel-Free\*

ESL 9635-HG is a general-purpose silver/palladium conductor that may be used on 96% alumina substrates and on dielectric. The 9635-HG exhibits excellent solderability when used on alumina or over various ESL dielectrics. It is also suitable for large-diameter aluminium wire bonding.

### PASTE DATA

<b>Rheology:</b>	Thixotropic, screen-printable paste
<b>Viscosity:</b> (Brookfield RVT, 10rpm, ABZ Spindle, 25.5 ± 0.5 °C)	325 ± 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>	850 - 1000°C in air
	Optimum: 850°C
	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 9635-HG 0609-C

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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)		11.5 ± 2.5 µm
<b>Approximate Coverage:</b>		90 - 110 cm <sup>2</sup> /g
<b>Resistivity:</b> (measured on a 100 mm x 0.25 mm conductor track at 12.5 µm fired thickness)		<20 mΩ/□
<b>Printing Resolution:</b> (line/space)		0.125 mm / 0.125 mm
<b>Solder Wettability:</b> (RMA flux, 5 sec. dip, 95.5Sn/3.8Ag/0.7Cu at 250°C)	on 96% alumina	95 - 100 %
<b>Solder Leach:</b> (No. of 10 sec. dips to double lowest resistance of 100 mm x 0.25 mm conductor, 95.5Sn/3.8Ag/0.7Cu at 250°C)		> 1 dip
<b>Adhesion:</b> (90° pull, 2 mm x 2 mm pads, 95.5Sn/3.8Ag/0.7Cu)		
	Initial pull strength:	> 6.0 kg
	Aged 48 hours at 150°C:	> 4.0 kg
<b>Ultrasonic Al Wire Bond:</b> (500 µm wire; bond length 4 mm)		> 1600 g
<b>Aged Al Wire Bond:</b> (1 hour at 300°C)		> 1400 g

ESL Europe 9635-HG 0609-C

\*Complies with RoHS, ELV, WEEE and CHIP 3 EC directives.

**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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