ESL ELECTROSCIENCE
CERAMIC TAPES & THICK-FILM MATERIALS
416 EAST CHURCH ROAD
KING OF PRUSSIA, PA 19406-2625, U.S.A
T: 610-272-8000
F: 610-272-6759
www.electroscience.com

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

Rheology:	Thixotropic, screen-printable paste
Viscosity: (Brookfield RVT, 10rpm, ABZ Spindle, 25.5 ± 0.5 °C)	325 ± 25 Pa.s
Bonding Mechanism:	Mixed-bonded
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 Affiliates
ESL Europe (Agmet Ltd) • 8 Commercial Road • Reading • Berkshire • England • RG2 0QZ • Tel: +44 (0) 118 918 2400 • Fax: +44 (0) 118 986 7331 • Sales@ESLEurope.co.uk
ESL Nippon • Sukegawa Bldg. • 6th floor • 3-4 Yanagibashi 1-chome • Taito-ku • Tokyo 111, Japan • Tel: +81-3-3864-8521 • Fax: +81-3-3864-9270 • Sales@ESL-Nippon.co.jp
ESL China • Room #1707, Tower A, City Center of Shanghai • 100 Zunyi Road • Shanghai, China 200051 • Tel: +86-21-6237-0336 and 0337 • Fax: +86-21-6237-0338
ESLChina@eslshanghai.net

TYPICAL PROPERTIES

Fired Thickness: (measured on a 2 mm x 2 mm pad on 96% alumina)		11.5 ± 2.5 µm
Approximate Coverage:		90 - 110 cm²/g
Resistivity: (measured on a 100 mm x 0.25 mm conductor track at 12.5 µm fired thickness)		<20 mΩ/□
Printing Resolution: (line/space)		0.125 mm / 0.125 mm
Solder Wettability: (RMA flux, 5 sec. dip, 95.5Sn/3.8Ag/0.7Cu at 250°C)	on 96% alumina	95 - 100 %
Solder Leach: (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
Adhesion: (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
Ultrasonic Al Wire Bond: (500 µm wire; bond length 4 mm)		> 1600 g
Aged Al Wire Bond: (1 hour at 300°C)		> 1400 g

***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.