



Electro-Science Laboratories, Inc.

416 East Church Road • King of Prussia, PA 19406-2625, U.S.A
610-272-8000 • Fax: 610-272-6759 • www.ElectroScience.com • Sales@ElectroScience.com

CONDUCTIVE SILVER CERMET

9990

Cermet silver ink 9990 with its MICRO-LOK[®] bonding mechanism gives excellent adhesion on a variety of substrates, such as, 96% alumina, 99.5% alumina, beryllia, and ferrite. ESL 9990 exhibits excellent solder wetting and solder leach resistance characteristics as well as good aluminum wirebonding.

PASTE DATA

RHEOLOGY:	Thixotropic, screen printable paste
VISCOSITY: (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)	225±25 Pa·s
BONDING MECHANISM:	MICRO-LOK [®]
SHELF LIFE: (25°C)	6 months

PROCESSING

SCREEN MESH/EMULSION:	325/25 µm
LEVELING TIME: (25°C)	5-10 minutes
DRYING AT 125°C:	10-15 minutes
FIRING RANGE:	850°C-950°C
OPTIMUM:	930°C
TIME AT PEAK:	10-12 minutes
RATE OF ASCENT/DESCENT:	50°C-60°C/minute
SUBSTRATE OF CALIBRATION:	96% alumina
THINNER:	ESL 401

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ESL Affiliates

Japan: ESL-Nippon Company, Ltd. • Sukegawa Bldg. • 6th floor • 3-4 Yanagibashi 1-chome • Taito-ku • Tokyo 111, Japan • Tel: (011-81)-3-3864-8521 • Fax: (011-81)-3-3864-9270
NipponSales@ESLNippon.com

China: Shanghai Agmet Electro-Science Laboratory Ltd. • Second Floor Bldg. 12A1 • #223 North Fe Te Road • Waigaoqiao Free Trade Zone • Shanghai, China
Tel: (011-86)-21-5866-0497 • Fax: (011-86)-21-5866-0497 • ShanghaiSales@ShanghaiESL.com

Europe: Agmet, Ltd. • 8 Commercial Road • Reading, Berkshire, England RG2 0QZ • Tel: (011-44)-118-987-3139 • Fax: (011-44)-118-986-7331 • Sales@ESLEurope.co.uk

See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

FIRED THICKNESS:		10-15 μm
APPROXIMATE COVERAGE:		100-125 cm^2/g
RESISTIVITY:		$\leq 3.0 \text{ m}\Omega/\text{sq.}$
PRINTING RESOLUTION: (Line/Space)		250 μm x 250 μm
SOLDER WETTABILITY: (RMA flux, 5 sec. dip)		
	(62 Sn/36 Pb/2 Ag, 220°C \pm 5°C)	95%-100%
	(63 Sn/37 Pb, 250°C \pm 5°C)	95%-100%
SOLDER LEACH: (No. of 10 sec. dip to double resistance of 0.25 mm wide x 100 mm long conductor)		
	(62 Sn/36 Pb/2 Ag 220°C \pm 5°C)	≥ 5
	(63 Sn/37 Pb 250°C \pm 5°C)	≥ 2
ADHESION: (90° pull, 2.0 mm x 2.0 mm pads, 62 Sn/36 Pb/2 Ag)		
	Initial pull strength:	$\geq 60 \text{ N}$
ULTRASONIC WIREBOND: (25 μm Al wire)		7-10 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 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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