



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 PLATINUM CONDUCTOR

5544

ESL 5544 is a screen printable, fritted Pt conductor for use on 96% alumina substrates in resistance-thermometer and heater applications. The TCR of the fired film is more than 3300 ppm/°C. The change of resistance is linear over the range of -50°C to +500°C.

PASTE DATA

RHEOLOGY:	Thixotropic, screen printable paste
VISCOSITY: (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)	160±25 Pa·s
METALLIC PHASE:	platinum
BONDING MECHANISM:	Fritted
SHELF LIFE:	6 Months

PROCESSING

SCREEN/MESH/EMULSION:	325/37.5 µm
LEVELING TIME: (25°C)	5-10 minutes
DRYING AT 125°C:	10-15 minutes
FIRING RANGE:	980°C-1300°C
OPTIMUM:	1200°C
CALIBRATION TEMPERATURE:	980°C
TIME AT PEAK:	10 minutes
SUBSTRATE OF CALIBRATION:	96% alumina
THINNER:	ESL 401

ESL Europe (KOP) 5544 0107-C

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

See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

FIRED FILM THICKNESS:	6-9 μm
RESISTIVITY:	$\leq 70 \text{ m}\Omega/\text{square}$
HOT TCR: (25°C to +125°C)	$\geq 3300 \text{ ppm}/^\circ\text{C}$
COLD TCR: (25°C to -55°C)	$\geq 3300 \text{ ppm}/^\circ\text{C}$
PRINTING RESOLUTION: (Line/Space)	125 μm x 125 μm

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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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