



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

PROTECTIVE POLYMER COATING

245- Black

RoHS Compliant*

ESL 245-Black is a filled, thermosetting modified silicone coating. It has been specifically formulated as a screen-printable protective coating for thick film conductors, resistors and capacitors on ceramic, porcelain enamelled steel and printed circuit boards. Only one layer (~25µm) is required when used as a protective coating.

This product can be used as a G2 coating.

Touch dry after 10 minutes drying at 125°C.

It provides a hard solvent resistant finish that can be overprinted with conventional marking inks.

PASTE DATA

Rheology: Thixotropic, screen-printable paste

Viscosity: 170 ± 25 Pa.s (ABZ Spindle)
(Brookfield RVT, 10 rpm, 25.5 ± 0.5 °C)

Shelf Life (20 - 25 °C): 6 months

PROCESSING

Screen Mesh, Emulsion: 200 S/S, 10 µm

Levelling Time (20°C): 5 - 10 min

Drying Time (at 125°C): 10 - 15 min

Curing Schedules: 150°C / 2hrs or 200°C / 1hr

Substrate for Calibration: 96% alumina

Thinner: ESL 402

ESL Europe 245-Black 1003-B

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

Cured Thickness: (measured on 96% alumina) (50 µm for the following data)	15 - 50 µm
Approximate Coverage:	120 cm ² / g
Volume Resistivity:	>10 ¹⁰ Ω.cm
Service Temperature:	-100 to +150°C
Dielectric Constant (K) at 1 kHz: (at 25°C)	6 - 8
Dissipation Factor at 1 kHz: (at 25°C, depending upon conductor)	<0.1%
Insulation Resistance: (at 100V DC)	>10 ¹⁰ Ω
Breakdown Voltage: (at 25°C in air)	> 500 V / 50µm
Solvent Resistance:	Good resistance to acetone when fully cured

ESL Europe 245-Black 1003-B

*None of the six substances referred to in the RoHS Directive (2002/95/EC) are used in the formulation of this product.

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.

DISCLAIMER: The product information and recommendations contained herein are based on data obtained by tests we believe to be accurate, but the accuracy and completeness thereof is not guaranteed. No warranty is expressed or implied regarding the accuracy of these data, the results obtained from the use hereof, or that any such use will not infringe any patent. ElectroScience assumes no liability for any injury, loss, or damage, direct or consequential, arising out of its use by others. This information is furnished upon the condition that the person receiving it shall make his own tests to determine the suitability thereof for his particular use, before using it. User assumes all risk and liability whatsoever in connection with his intended use. ElectroScience's only obligation shall be to replace such quantity of the product proved defective.
