



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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INSULATING COMPOSITION

4925-A

HOS Heaters on Steel® • COS Circuits on Steel® • TFOS Thick Film on Steel®

RoHS Compliant*

ESL 4925-A is a dielectric composition designed for use as a buffer layer between 4924 and ESL resistor materials. These materials are also useful in other TFOS Thick Film on Steel® applications.

PASTE DATA

Rheology:	Thixotropic, screen-printable paste
Viscosity: (Brookfield RVT, 10 rpm, ABZ spindle, 25.5 ± 0.5 °C)	220 ± 50 Pa•s
Color:	Dark blue
Shelf Life (25 °C):	6 months

PROCESSING

Screen Mesh, Emulsion:	Small area	200 / 37 ± 5 µm
	Large area	165 / 0 µm
Levelling Time (at 20°C):		5 - 10 min.
Drying Time (at 125°C): (Depending on substrate volume)		> 15 min.
Firing Temperature Range:		850 - 930°C
	Optimum:	850 °C
	Time at peak:	10 - 12 min.
Rate of Ascent/Descent:		50°C – 60°C/min.
Substrate for Calibration:		Type 430 stainless steel
Thinner:		ESL 401

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See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

Fired Thickness:	> 80 μm
Breakdown Voltage:	> 1,000 VAC
Approximate Coverage: (at 40 μm fired thickness)	80 cm^2/g
Insulation Resistance: (at 25°C, 100 VDC)	$\geq 10^9 \Omega$
Dielectric Constant (K):	11 - 14
Dissipation Factor:	$\leq 0.5\%$

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*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.

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