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POLYMER DIELECTRIC 14401

High Temperature Insulating Coating

ESL 14401 is a high temperature dielectric, that provides very good adhesion, thermal stability, and electrical insulation when used over metal substrates such as aluminum or steel. It is designed for use with 19101 polymer silver conductor for heater applications requiring high temperature stability.

PASTE DATA

RHEOLOGY:	Thixotropic, screen printable paste
VISCOSITY: (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)	60±10 Pa·s
COLOR:	Brown
SHELF LIFE: (at 5°C)	3 months

PROCESSING

SCREEN MESH/EMULSION:	165-200/0-30 µm
LEVELING TIME:	5-10 minutes
DRYING AT 125°C:	10-15 minutes
CURING CYCLE:	320°C/150 minutes (10°C-15°C/min. rise)
SUBSTRATE FOR CALIBRATION:	alumina
THINNER:	ESL 455

ESL Affiliates
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See Caution and Disclaimer on other side.

TYPICAL PROPERTIES (five print, dry, co-cured layers, 320°C/150 minutes, ≥50 µm)

CURED THICKNESS:	≥50 µm
DIELECTRIC CONSTANT (K) AT 1 MHz: (25°C)	3.8-4.8
DISSIPATION FACTOR AT 1 MHz: (25°C)	< 0.2%
INSULATION RESISTANCE: (at 100 VDC)	> 10^{12} Ω•cm
BREAKDOWN VOLTAGE: (at 25°C in air)	≥ 1500VDC/25µm
FLASH BREAKDOWN VOLTAGE: (at 250°C, one minute, 5mA leakage current trip using a standard Clare Flash Tester, aluminum substrate)	≥ 1250VAC
STABILITY: (16 hrs. at 250°C)	No measurable change of electrical properties
COMPATIBLE MATERIALS:	ESL 19101 Silver Conductor
	ESL 15501 Resistor

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