



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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COPPER CONDUCTOR

2312-G

RoHS Compliant* Conductor Designed For Use On Alumina and Aluminum Nitride Substrates

ESL 2312-G is a copper paste especially designed for excellent adhesion on alumina and aluminum nitride substrates. This material can be fired at 900°C to 980°C in nitrogen. Optimum performance can be achieved by firing at 980°C.

PASTE DATA

RHEOLOGY:	Thixotropic, screen printable pastes
VISCOSITY: (Brookfield RVT, ABZ spindle, 10RPM at 25.5°C±0.5°C)	315±100 Pa·s
SHELF LIFE:	6 months

PROCESSING

SCREEN MESH/EMUSLION:	325 mesh/25 µm
FIRING RANGE:	900°C-980°C
OPTIMUM PEAK TEMPERATURE:	980°C
TIME AT PEAK:	10-12 minutes
ATMOSPHERE:	Nitrogen
SUBSTRATE OF CALIBRATION:	96% alumina
THINNER:	ESL 401

2312-G 1304-new

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See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

RESISTIVITY (25µm fired thickness):		≤ 2mΩ/sq.
PRINTING RESOLUTION (Line/Space):		125µm x 125µm
SOLDERABILITY (SAC 95.5Sn/3.8Ag/0.7Cu, 250°C ±5°C):		excellent
ADHESION (90° pull, 2mm x 2mm pads):	Alumina:	≥60N
	Aluminum Nitride:	≥40N

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*Complies with RoHS, ELV, WEEE and CHIP 3 EC directives

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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