COPPER CONDUCTOR

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/EMULSION: 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
**TYPICAL PROPERTIES**

**RESISTIVITY** (25µm fired thickness): \(\leq 2m\Omega/\text{sq.}\)

**PRINTING RESOLUTION** (Line/Space): \(125\mu\text{m} \times 125\mu\text{m}\)

**SOLDERABILITY** (SAC 95.5Sn/3.8Ag/0.7Cu, 250°C ±5°C): excellent

**ADHESION** (90° pull, 2mm x 2mm pads):
- Alumina: \(\geq 60\text{N}\)
- Aluminum Nitride: \(\geq 40\text{N}\)

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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 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.

**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 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. Electro-Science 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 own tests to determine the suitability thereof for their particular use, before using it. User assumes all risk and liability whatsoever in connection with their intended use. Electro-Science’s or shall be to replace such quantity of the product proved defective.

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