



## ESL ELECTRO-SCIENCE

CERAMIC TAPES &  
THICK-FILM MATERIALS

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### GOLD METALLO-ORGANIC CONDUCTOR

### 8081-C

#### Lead, Cadmium, and Nickel-free

ESL 8081-C is a thin printing metallo-organic gold that produces a fired conductive film of less than one-micrometer in thickness. It is economical because of its high coverage. This conductor contains a precious metal composition that decomposes with heat at temperatures above 300°C. Depending on the substrate material, at temperatures near 600°C, a “thin” film with good adhesion to the substrate is formed. The paste can be used on alumina, glazed alumina, borosilicate, and soda-lime substrates. By printing this conductor to the exact pattern desired, it can be used for many conductive purposes in which direct wire bonding or soldering is not required.

#### PASTE DATA

<b>RHEOLOGY:</b>	Thixotropic, screen printable paste
<b>VISCOSITY:</b> (Brookfield RVT, ABZ spindle, 10 rpm, 25.5°C±0.5°C)	50±10 Pa·s
<b>SHELF LIFE:</b> (25°C)	6 months

#### PROCESSING

<b>SCREEN MESH/EMULSION:</b>	325-400 mesh/0-28 µm
<b>LEVELING TIME:</b> (25°C)	5-10 minutes
<b>DRYING:</b> (125°C)	10-15 minutes
<b>FIRING RANGE:</b>	625°C-850°C
<b>OPTIMUM:</b>	850°C
<b>RATE OF ASCENT/DESCENT:</b>	60°C-100°C/minute
<b>SUBSTRATE FOR CALIBRATION:</b>	96% alumina
<b>THINNER:</b>	ESL 413

8081-C 0904-New

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See Caution and Disclaimer on other side

## TYPICAL PROPERTIES

<b>FIRED THICKNESS:</b>	< 1 $\mu\text{m}$
<b>RESISTIVITY:</b>	< 800 $\text{m}\Omega/\text{sq.}$

### NOTES:

1. Adequate air flow and ventilation to remove the burn-off products is essential or unpleasant odors may accumulate.
2. Thinners are not normally required. ESL 413 may be used sparingly. For screen cleaning, ESL 413, isopropyl alcohol, or acetone may be used.

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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.

**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. 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 make their 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 only obligation shall be to replace such quantity of the product proved defective.

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