



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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GOLD METALLO- ORGANIC COMPOSITION 8081-A

ESL 8081-A is a thin printing metallo-organic gold that produces a fired conductive film of less than one-micrometer in thickness. It can be used for non-migrating terminations for thick film resistors and is economical because of its high coverage. It is not recommended for wire bonding or soldering because of its thinness. This conductor contains a precious metal composition that decomposes with heat at temperatures above 300°C. At temperatures near 600°C, a "thin" film with good adhesion to the substrate is formed. 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

Rheology:	Thixotropic, screen-printable paste
Viscosity: (Brookfield RVT, 10rpm, No. 5 spindle, 25.5 ± 0.5 °C)	50 ± 10 Pa.s
Shelf Life (20°C):	6 months

PROCESSING

Screen Mesh, Emulsion:	200 - 325 mesh, 25-33 µm
Levelling Time (at 20°C):	5 - 10 min
Drying Time (at 125°C):	10 -15 min
Firing Temperature Range:	625 - 850°C
	Optimum: 850°C
Rate of Ascent/Descent:	60 - 100 °C min
Substrate for Calibration:	96% alumina
Thinner:	ESL 413

ESL Europe (KOP) 8081-A 9907-G

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See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

Fired Thickness:	< 1 μm
Resistivity:	< 400 $\text{m}\Omega/\square$

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, ESL413, isopropyl alcohol or acetone may be used.

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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 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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