

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: C5020



Gold Conductor Paste

Description

C5020 is an unfritted lead, nickel and cadmium free gold conductor. It is designed for application on top of a gold based layer to increase thickness and solderability.

In a single print and fire application on a gold base layer it yields a thick, dense film that is free from blisters, cracks, and other cosmetic defects.

C 5020 has good adhesion when printed over a gold base layer of Heraeus Au conductors. It is not designed to be used without a gold base layer.

Key Benefits

- Excellent choice for higher conductivity applications that require thick gold conductor
- Free of lead, cadmium and nickel

Processing

1) Spatulate well prior to processing.

When stored in a fridge: The paste should have acquired room temperature before being opened, to avoid condensation.

- 2) Print through a 200 – 325 mesh stainless steel screen.
- 3) Level at room temperature for 10 minutes.
- 4) Dry at 125 – 150 °C for 10 – 20 minutes.
- 5) Fire at 550 – 950 °C (peak) for 10 minutes, and with a total firing cycle time of c. 30 – 60 minutes.

Thinner

HVS 100

Typical Properties (Paste)

Form	Pseudoplastic paste
Viscosity	35 – 55 Pas (25 °C, D = 75/s)
Printing Speed	Up to at least 10 cm/s
Coverage	Approx. 50 cm ² /g (FFT: 8 µm)
Shelf Life	6 months from date of shipment with correct storage (in a dry, cool (5 to 25 °C) and dark place with container tightly shut).

Typical Properties (Fired)¹

Fired Film Thickness ² (FFT)	6 – 10 µm
Line Definition	≥ 100 µm
Resistivity ²	≤ 4.5 mΩ/□ (FFT: 8 µm)

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Legend:

1) Typical property based on laboratory test methods. For optimum results all materials should be fired in a profiled furnace supplied with dried, hydrocarbon and other contaminant free air (PP-1).

2) Measured after printing with a 325 mesh steel screen; screen thickness and emulsion thickness combined was c. 75 µm, and the resultant printed track was 500 µm wide.

* See the data sheet issue date (DD/MM/YY) as reference of validity of latest edition which is available on request

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