

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: C2220



Silver / Palladium Conductor Paste

Description

C2220 is a lead free 2.1 : 1 Ag / Pd conductor paste which exhibits high density, high reliability and good fine line definition.

It fires to a smooth surface and is mechanically durable and chemically resistant. Due to these characteristic C2220 is a recommended material for application such as fuel sensors.

Key Benefits

- Excellent conductivity, leach resistance and resistance to silver migration
- Free of lead, cadmium, nickel and phthalate

Processing

- 1) Spatulate well prior to processing.

When stored in a refrigerator, the paste should have acquired room temperature before being opened, to avoid condensation.
- 2) Print through a 325 mesh stainless steel screen. Total thickness: approx. 75 µm.
- 3) Level at room temperature for 5 – 10 minutes.
- 4) Dry at 150 °C for 10 – 20 minutes.
- 5) Fire at 850 °C (peak) for 10 minutes, and with a total firing cycle time of c. 30 – 60 minutes.

Thinner

HVS 507

Typical Properties (Paste)

Form	Pseudoplastic paste
Viscosity	30 – 50 Pas (25 °C, D = 100/s)
Solids	84.5 % ± 1.5 %
Printing Speed	Up to 20 cm/s
Shelf Life	6 months from date of shipment with correct storage (in a dry, cool (5 – 25 °C) and dark place with container tightly shut).

Typical Properties (Fired)¹

Fired Film Thickness ² (FFT)	8.0 – 12.0 µm
Line Definition	≥ 125 µm
Resistivity ²	≤ 50 mΩ/□ (FFT: 12 µm)
Aged Adhesion (Sn96/Ag3.5/Cu0.5)	≥ 20 N (48 hrs, 150 °C)
Leach Resistance (Sn96/Ag3.5/Cu0.5)	≥ 4 dips (245 °C, 5 sec each)

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Legend:

¹⁾ Typical properties 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

Heraeus Electronics
Heraeus Deutschland GmbH & Co. KG
Heraeusstraße 12 – 14
63450 Hanau, Germany
www.heraeus-electronics.com

Americas
Phone +1 610 825 6050
electronics.americas@heraeus.com

China
Phone +86 53 5815 9601
electronics.china@heraeus.com

Asia Pacific
Phone +65 6571 7649
electronics.apac@heraeus.com

Europe, Middle East and Africa
Phone +49 6181 35 4370
electronics.emea@heraeus.com