

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: C 6212



Solderable AuPdPt Conductor Paste for FLS

Description

C 6212 is a lead-free, screen printable, solderable Gold / Palladium / Platinum conductor paste for FLS (fuel level sensor) applications.

C 6212 is optimized in hardness and surface density. It shows excellent printability resulting in high line definition and smooth surface under various drying conditions.

Key Benefits

- Most suitable material for low sulfur fuel application because of absence of silver
- Very smooth fired surface which exhibits very durable mechanical resistance and chemically very resistant
- Solderable with customary solder alloys
- Free of lead, cadmium, nickel and phthalate
- RoHS³ and REACH⁴ compliant

Processing

- 1) Spatulate well prior to processing.

When stored in a refrigerator, allow paste to come to room temperature prior to opening, to avoid condensation.

- 2) Print through a 200 – 325 mesh screen. 0.03 – 0.04 mm Ø wire and 20 – 30 µm emulsion.
- 3) Level at room temperature for 10 minutes.
- 4) Dry at max. 150 °C for 8 – 10 minutes.
- 5) Fire at 850 °C (peak) for 10 minutes, and with a total firing cycle time of 30 – 60 minutes.

Thinner

HVS 252

Typical Properties (Pastes)

Form	Pseudoplastic paste
Viscosity	40 – 70 Pas (25 °C, D = 50/s)
Solids	86.0 % ± 1.0 %
Coverage	c. 65 cm ² /g (at FFT: 10 µm)
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)	7.5 – 11.5 µm
Line Definition ²	≥ 125 µm
Resistivity ²	≤ 85 mΩ/□ (at FFT: 10 µm)
Adhesion ² -Sn62/Pb36/Ag2 -Sn96/Ag3.5/Cu0.5	1 x 850 °C, 16 h at RT ≥ 20 N ≥ 20 N
Leach Resistance -Sn62/Pb36/Ag2 -Sn96/Ag3.5/Cu0.5	2 x 850 °C + 500 °C ≥ 10 dips (235 °C, 10 s each) ≥ 10 dips (245 °C, 5 s each)

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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 result printed track was 500 µm wide.
- 3) RoHS compliant according to the latest * Directives (European Union) of Restriction of Hazardous Substances ("RoHS") and its subsequent amendments (including the exceptions related to Pb)
- 4) REACH compliant according to the latest * Annex XIV to Regulation (EC) of the European Parliament and of the council on the Registration, Evaluation, Authorisation and Restriction of Chemicals ("REACH") by European Chemicals Agency and its subsequent amendments; the material does not contain any substance listed in Annex XIV.

* 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 21 3357 5457
electronics.china@heraeus.com

Asia Pacific
Phone +65 6571 7677
electronics.apac@heraeus.com

Europe, Middle East and Africa
Phone +49 6181 35 3069, +49 6181 35 3627
electronics.emea@heraeus.com