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Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: C6012

Solderable AuPdPt Conductor Paste for Fuel Sensors

Description

C6012 is a screen printable, solderable Gold / Palladium / Platinum conductor paste for fuel sensor applications.

C6012 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 sulphur fuel application because of absence of silver
- Very smooth fired surface which exhibits very durable mechanical resistance and chemically extremely resistant
- Solderable with customary solder alloys
- Free of cadmium and nickel

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 stainless steel 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 c. 30 – 60 minutes.

Thinner

HVS 100

Typical Properties (Paste)

Form	Pseudoplastic paste
Viscosity	70 – 90 Pas (25 °C, D = 50/s)
Solids	85.0 % ± 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/□ (FFT: 10 µm)
Adhesion[2] (Sn62/Pb36/Ag2)	≥ 20 N (16h at RT)
Solderable with	Sn62/Pb36/Ag 2 Sn96.5/Ag3.5 Sn63/Pb37

Typical adhesion data

Storage	Solder Alloy		
	Ag2	Ag3.5	Pb37
Initial	≥ 20 N	≥ 20 N	≥ 20 N
48 h / 100 °C	≥ 20 N	≥ 20 N	≥ 20 N
500 h / 100 °C	≥ 20 N	≥ 18 N	≥ 20 N
1000 h / 100 °C	≥ 18 N	≥ 15 N	≥ 18 N

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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

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