

Conductors

C 6012

Solderable AuPdPt Conductor Paste for Fuel Sensors

Description:

C 6012 is a solderable Au/Pd/Pt conductor paste for fuel sensor applications. It is solderable with customary solder alloys. It does not contain Ag, Cd or Ni.

C 6012 is optimized in hardness and surface density. It shows excellent printability resulting in high line definition and smooth surface under various drying conditions.

It exhibits very good mechanical resistance after firing.

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 100

Properties (Paste):

Form:	Thixotropic paste
Viscosity:	70 – 90 Pa s, (25°C, D = 50 s ⁻¹)
Solids:	85.0 +/- 1.0 %
Coverage:	c. 65 cm ² /g (FFT 10µm)
Shelf Life:	6 months with correct storage. 5 – 25 °C in a cool, dry, dark place, and with the container tightly sealed.

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 :	≥ 20 N (Sn62Pb36Ag2, 16h at RT)

Solderable with: Sn62Pb36Ag2
Sn96.5Ag3.5
Sn63Pb37

Typical data:

Storage	Sn62Pb36Ag2	Sn96.5Ag3.5	Sn63Pb37
initial	≥ 20 N	≥ 20 N	≥ 20 N
48h/100 °C	≥ 20 N	≥ 20 N	≥ 20 N
500h/100 °C	≥ 20 N	≥ 18 N	≥ 20 N
1000h/100 °C	≥ 18 N	≥ 15 N	≥ 18 N

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

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.

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The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for a particular application.

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