

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: C2210 (LPA 509-229)



Palladium Alloy Conductor Paste

Description

C2210 (LPA 509-229) is a lead free 0.8 : 1 Ag / Pd pre- alloyed conductor paste which exhibits high reliability and remarkable fine line resolution.

C2210 (LPA 509-229) has an enriched Pd content to address increased demands by low sulfur fuel applications and greatly reduces risk of silver migration.

Key Benefits

- Excellent conductivity, leach resistance and resistance to silver migration
- Exceptional chemical and physical wear resistance in use as a track material for sliders
- Low cost alternative to gold in stringent fuel sensor application
- Free of lead, cadmium and nickel
- REACH³ and ROHS⁴ compliant

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 200 – 325 mesh stainless steel screen.
- 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 100

Typical Properties (Paste)

Form	Pseudoplastic paste
Viscosity	25 – 45 Pas (25 °C, D = 100/s)
Solids	82.5 % ± 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)	8.5 – 12.0 µm
Line Definition	≥ 125 µm
Resistivity ²	≤ 130 mΩ/□ (FFT: 12 µm)
Aged Adhesion (Sn62/Pb36/Ag2)	≥ 20 N (16 hrs, 25 °C)
Leach Resistance	Not available

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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.

3) 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.

4) 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)

* 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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