

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: C3657



Platinum Conductor Paste

Description

C3657 is a screen printable fritted platinum conductor, which possesses a good conductivity. It is particularly useful for the manufacture of O₂ sensors.

Key Benefits

- Chemically resistant
- Can be used on alumina, zirconia or other bodies
- Free of cadmium and nickel
- REACH³ and ROHS⁴ compliant

Typical Properties (Paste)

Form	Pseudoplastic paste
Viscosity	30 – 45 Pas (25 °C, D = 100/s)
Solids	67.5 % ± 2.5 %
Printing Speed	Up to at least 10 cm/s
Shelf Life	6 months from date of shipment with correct storage (in a dry, cool (2 – 23 °C) and dark place with container tightly shut).

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 10 minutes.
- 4) Dry at 150 – 180 °C for 10 – 20 minutes.
- 5) Fire at 850 – 950 °C (peak) for 10 minutes, and with a total firing cycle time of c. 30 – 60 minutes (the higher the temperature, the denser the surface produced and the better its adhesion).

Typical Properties (Fired)¹

Fired Film Thickness ² (FFT)	c. 5 µm
Resistivity ²	60 – 90 mΩ/□ (FFT: 5 µm)
Fired Film Density	> 90 %

Thinner

HVS 100

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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. 100µm, 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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