

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: TC 7306A



Plateable Ag Top Conductor Paste for LTCC

Description

TC 7306A is a pure silver paste developed for plateable top conductor applications. It provides excellent compatibility with various kinds of Heraeus tape systems during the co-firing process.

Key Benefits

- It is optimized for screen printing of conductor tracks. It may readily used to print fine line patterns not only as top conductors but also as inner electrodes applying lower fired film thickness
- Excellent fine line definition
- Suitable for electro-less plating after firing
- Free of lead, nickel, cadmium and phthalate
- REACH³ and RoHS⁴ 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.
- 3) Level at room temperature for 5 – 10 minutes.
- 4) Dry at max. 80 °C for 10 – 30 minutes.
- 5) Fire at 850 – 865 °C (peak) for up to 30 minutes, and with a total firing cycle time up to 12 hours (most often practicable in a box oven).

Thinner

HVS 507

Typical Properties (Paste)

Form	Pseudoplastic paste
Viscosity	30 – 50 Pas (25 °C, D = 75/s)
Solid	86.0 % ± 1.5 %
Coverage:	Approx. 76 cm ² /g (FFT at 12 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)	13 – 18 µm (top conductor)
Resistivity ²	≤ 4 mΩ /□ (FFT at 12 µm)

Compatibility

Tapes	CT 700 Series CT 800 Series
-------	--------------------------------

Technical Data Sheet



Plateable Ag Top Conductor Paste for LTCC

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 on alumina 96% with a 200 mesh stainless steel screen; screen thickness and emulsion thickness combined was c. 100 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

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