

Conductors

TC 7306 A



Plateable Ag Top Conductor Paste for LTCC

Description

TC 7306 A is a pure silver paste developed for plateable top conductor applications. It is optimized for screen printing of conductor tracks. It may readily used to print fine line patterns. It provides excellent compatibility with various kinds of Heraeus tape systems during the co-firing process.

Key Benefits

- Excellent fine line definition
- Suitable for electro-less plating after firing
- Free of lead, cadmium and nickel
- Free of 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 or 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 of up to 12 hours (is most often practicable in a box oven).

Thinner HVS 507

Typical Properties (Paste)

Form:	Thixotropic paste
Viscosity:	30 - 50 Pas, (25 °C, D = 75 s ⁻¹)
Solids:	86.0 % ± 1.5 %
Coverage:	Approx. 76 cm ² /g (FFT ⁵ : 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

Resistivity ² :	≤ 4 mΩ / □ (FFT ⁵ : 10 µm)
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Compatibility

Dielectrics:	CT 700 Series CT 800 Series
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- 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 Commission Regulation (EU) No 143/2011 of 17 February 2011 amending Annex XIV to Regulation (EC) No 1907/2006 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 Directives (European Union) No 2011/65/EC of Restriction of Hazardous Substances ("RoHS") and its subsequent amendments (including the exceptions No. 7. c. I of the EU Directive e.g. related to Pb)
- 5 FFT: Fired Film Thickness

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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