

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: TC 7406



Ag / Pd Via Fill Paste for LTCC

Description

TC 7406 is a silver palladium via fill conductor (ratio Ag:Pd = 13:1) which provides excellent compatibility with Heraeus tape system of CT 700 and CT 800 Series during the co-firing process.

Key Benefits

- Optimized for stencil printing of vias
- Recommended as a via-fill paste for top vias for connection to Au pastes TC 7104 and C 5756
- Also compatible with Ag and AgPt co-firing pastes, TC 7303 (LPA 410-053) and TC 7601 (LPA 610-066), and with various post-firing pastes
- Free of lead, nickel, cadmium and phthalate
- REACH³ and RoHS⁴ compliant

Processing

- 1) Spatulate well prior to processing.

When stored in a fridge: the paste should have acquired room temperature before being opened to avoid condensation.

- 2) Print through a stencil.
- 3) Level at room temperature for 10 minutes.
- 4) Dry at max. 80 °C for at least 20 minutes.
- 5) Fire at 850 – 865 °C (peak) for up to 30 minutes, and with a total firing cycle time up to 10 hours (most often practicable in a box oven).
- 6) Firing profile recommended:
 - 2 K/min up to 865 °C
 - 20 min at 865 °C
 - 3 K/min down to 25 °C

Thinner

HVS 507

Typical Properties (Paste)

Form	Pseudoplastic paste
Viscosity	150 – 250 Pas (25 °C, D = 15/s)
Solid	90.0 % ± 1.0 %
Shelf Life	12 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

Via Definition	≥ 80 µm
Resistivity ²	≤ 0.05 mΩ.cm

Compatibility

Tapes	CT 700 Series CT 800 Series
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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 stainless steel stencil with a thickness of c. 100 µm, and the resultant printed geometry was 40mm x 10mm on dielectric.

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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