

Conductors

TC 7301 A



Ag Via Fill Paste for LTCC / DPIS*

* Development Product Information Sheet

Description

TC 7301 A is a pure Ag via fill which provides excellent compatibility with Heratape Series of CT 700 and CT 800 during the co-firing process.

Key Benefits

- TC 7301 A is optimized for stencil printing of vias.
- The paste is compatible with other co-firing pastes and with various post-firing pastes.
- Free of lead, cadmium and nickel
- Free of phthalate
- REACH³ and RoHS⁴ compliant

Processing

1. Spatulate well prior to processing. The paste should have acquired room temperature before being opened, to avoid condensation.
2. Print through a stencil.
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 10 hours (is often most practicable in a box oven).

Thinner

HVS 507

Typical Properties (Paste)

Form:	Thixotropic paste
Viscosity:	240 – 340 Pas (25°C, D = 15 s ⁻¹)
Solids:	92.5% ± 1.0%
Shelf Life:	12 months from date of shipment with correct storage (in a dry, cool (5 to 25 °C) and dark place with container tightly shut)

Typical Properties (Fired)¹

Via Definition:	≥ 80 µm
Resistivity ² :	≤ 0.02 mΩ • cm (Fired Film Thickness: 10 µm)

Compatibility

Tapes:	CT 700 Series CT 800 Series
Conductors:	TC 7303 (inner, Ag) TC 7305 (top/inner, Ag) TC 7306A (top/inner, Ag)

Post-fired:

TC 7404 (top, AgPd)
TC 7407 (top, AgPd)

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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 with a metal stencil; thickness was c. 100 µm, and the resultant printed geometry was 40mm x 10mm.
- 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; we define a material as REACH compliant, as long as substances used are not recorded in the 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)

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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