

## Technical Data Sheet

### THICK FILM MATERIALS

Product Type: Conductors

Product Name: TC 7305



### Ag Conductor Paste for LTCC

#### Description

TC 7305 is a pure Ag conductor which provides excellent compatibility with Heraeus tape system of CT 700 and CT 800 Series during the co-firing process.

#### Key Benefits

- The paste is optimized for screen printing of conductor tracks as an inner conductor as well as a solderable top conductor
- It may readily be used to print fine line patterns
- Free of lead, nickel, cadmium and phthalate
- REACH<sup>4</sup> and ROHS<sup>5</sup> 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 200 – 325 mesh stainless steel 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	40 – 65 Pas (25 °C, D = 75/s)
Solid	80.0 % ± 1.5 %
Coverage	c. 110 cm <sup>2</sup> /g (FFT: 8 µm)
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)<sup>1</sup>

Fired Film Thickness <sup>2</sup> (FFT)	6.0 – 8.5 µm
Resistivity <sup>2</sup>	≤ 5 mΩ /□ (FFT: 12 µm)
Line Definition <sup>3</sup>	≥ 125 µm

#### 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 on alumina 96% with a 325 mesh stainless steel screen; screen thickness and emulsion thickness combined was c. 75 µm, and the resultant printed track was 500 µm wide.

3) Measured on 13" x 13" prints with 325 mesh stainless steel screen; screen thickness and emulsion thickness combined was c. 75 µm.

4) 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.

5) 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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