

Technical Data Sheet

THICK FILM MATERIALS

Product Type: LTCC Materials

Product Name: TC2304HQ



Co-Firing Silver Conductor

Description

TC2304HQ is a pure Ag conductor with low resistivity and superior fine line print resolution. TC2304HQ provides excellent compatibility with low temperature co-fired ceramic (LTCC) tape during the co-firing process.

TC2304HQ is optimized for screen printing as a routing conductor. The material may readily be used to print fine line patterns.

Key Benefits

- Low resistivity provides low line loss at microwave frequencies
- Minimal posting
- Prints fine line patterns – 75 µm
- REACH¹ and ROHS² compliant

Typical Properties

Resistivity:

≤ 2 mΩ/□ at 15 µm cofired in LTCC

Viscosity:

400 – 600 Kcps Brookfield HBT
SC4 – 14 spindle, 6R utility cup at 10 rpm, 25 °C

Solids:

82.5 ± 1.5 %

Recommended Processing Guidelines

Printing:

290 – 400 mesh stainless steel screen
Slow print speed (1.5 in/sec) for optimal fine line resolution

Drying:

80 °C for 10 to 20 minutes

Firing:

870 – 880 °C peak temperature
Dwell time of 30 minutes at peak
Total cycle time of up to 12 hours
(Most easily achieved in a box oven).

Fired Film Thickness:

11 – 19 µm

Line Resolution:

75 µm printed (67 µm fired)

Thinner:

RV-507

Warranty:

Material guaranteed to meet specifications for 3 months from date of shipment.

Storage:

Store in a dry location at 5 – 25 °C.

DO NOT REFRIGERATE.

Allow paste to come to room temperature prior to opening. Spatulate well before using, as settling may occur during storage.

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Legend:

1) 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.

2) 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)

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