

Technical Data Sheet



THICK FILM MATERIALS

Product Type: LTCC Materials

Product Name: TC2603



Co-Firing Silver/Platinum Top Conductor

Description

TC 2603 is an Ag/Pt conductor with low resistivity and provides excellent compatibility with low temperature co-fired ceramic (LTCC) during the co-firing process.

TC 2603 is optimized for screen-printing of top conductor solder pads and traces.

Key Benefits

- Compatible with LTCC
- Excellent results with Pb free solder
- Pb and Cd free
- REACH¹ and RoHS² compliant

Typical Properties

Resistivity:

≤ 9 mΩ/□ at 16 μm dried film thickness

Viscosity:

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

Adhesion:

80 x 80 mil pad
RMA flux

	62/36/2 @ 225 °C	95/5 SnAg @ 260 °C
Initial:	≥ 3.0 lbs	≥ 4.0 lbs
Aged: (48 hours @ 150 °C)	≥ 2.0 lbs	≥ 3.0 lbs

Solderability:

RMA flux

	62/36/2 @ 225 °C	95/5 SnAg @ 260 °C
10s:	≥ 50 %	≥ 50 %
10s + (3x2s):	≥ 95 %	≥ 95 %

Solder Leaching:

3 x 10 sec Dips, % Line Lost

	62/36/2 @ 225 °C	95/5 SnAg @ 260 °C
	≤ 5 %	≤ 5 %

Solids:

81.3 ± 2.0 %

Recommended Processing Guidelines

Printing

290 or 325 mesh stainless steel screen
0.5 mil emulsion

Drying

Maximum temperature 80 °C for 10 to 20 minutes

Firing

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

Dried Film Thickness:

16 – 20 μm

Line Resolution:

≥ 150 μm (6 mil)

Thinner:

RV-507

Warranty:

Material guaranteed to meet specifications for 6 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.

Technical Data Sheet



Co-Firing Silver/Platinum Top Conductor

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)

Heraeus Electronics
Heraeus Deutschland GmbH & Co. KG
Heraeusstraße 12 – 14
63450 Hanau, Germany
www.heraeus-electronics.com

Americas
Phone +1 610 825 6050
electronics.americas@heraeus.com

China
Phone +86 21 3357 5457
electronics.china@heraeus.com

Asia Pacific
Phone +65 6571 7677
electronics.apac@heraeus.com

Europe, Middle East and Africa
Phone +49 6181 35 3069, +49 6181 35 3627
electronics.emea@heraeus.com