

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: C5729



Pb and Cd Free Gold Conductor

Description

C5729 is a Pb and Cd free, gold conductor paste that has been formulated for use with Al or Au wire bond applications.

Key Benefits

- REACH¹ and ROHS² compliant
- Excellent Al and Au bondability
- High conductivity
- Fine line printing
- Pb and Cd free

Typical Properties

Resistivity

≤ 5.5 mΩ/□ at 12 μm fired film thickness using 25 mil wide serpentine conductor pattern

Line Definition

150 μm lines and spaces (6 mils)

Coverage

118 cm²/g at 12 μm fired film thickness (400 mesh, 0.9 mil wire, 0.5 mil emulsion)

Viscosity

380 – 480 Kcps, Brookfield HBT SC4-14 spindle and 6R utility cup at 10 rpm, 25 °C

Au Wire Bondability

2 mil wire
99.99 % Au, Elongation 3 – 5 %
Initial: > 20 g

Solids

86.5 ± 1.0 %

Recommended Processing Guidelines

Printing

280 mesh stainless steel screen
1.2 mil wire
45° angle
0.6 mil emulsion

Print Speed

≥ 4 in/sec (≥ 10 cm/sec)

Settling

A settling time of 10 – 15 minutes is recommended. Parts should be dried as soon as possible after the settling period, (within 20 minutes), so the paste does not skin over. Parts should not be left out for long periods of time before drying. This allows the paste to skin over and can compromise adhesion. Wet parts should be covered if not dried right away.

Drying

150 °C for 10 minutes
Make sure ventilation is sufficient to prevent the wet film from skinning

Firing

850 °C peak temperature, 10 minutes at peak
Total cycle time of 45 – 60 minutes

Thickness

Dried: 20 – 22 μm
Fired: 8 – 11 μm

Compatibility

IP9217, IP9227 and IP9117D Multilayer Dielectrics

Thinner

RV-372

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.

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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)

* 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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