

## Technical Data Sheet

### THICK FILM MATERIALS

Product Type: Conductors

Product Name: C 5730



Pb and Cd Free Gold Conductor

#### Description

C 5730 is a Pb, Ni and Cd free, gold conductor paste that has been formulated for use with Al or Au wire bond applications on Al<sub>2</sub>O<sub>3</sub> and AlN.

#### Key Benefits

- REACH<sup>1</sup> and ROHS<sup>2</sup> compliant
- Excellent Al and Au bondability
- High conductivity
- Good adhesion on Al<sub>2</sub>O<sub>3</sub> and AlN

#### Typical Properties

##### Resistivity

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

##### Coverage

72.0 – 75.0 cm<sup>2</sup>/g at 22 – 25 μm wet film thickness

##### Viscosity

280 – 380 Kcps Brookfield HBT  
SC4 – 14 spindle, 6R cup at 10 rpm, 25 °C

##### Al Wire Bondability

1.25 mil Wire  
99 % Al, 1 % Si, Elongation 0.5 – 1.5 %  
Initial: ≥ 8 g  
\* Note: All failures were wire breaks

##### 10 mil Wire

99.88 % Al, Elongation 15 – 21.5 %  
Initial: ≥ 250 g

##### Au Wire Bondability

1.25 mil Wire  
99.99 % Au, Elongation 3.0 – 5.0 %  
Initial: > 8 g

##### Solids

85.5 ± 1.5 %

#### Recommended Processing Guidelines

##### Printing

280 – 325 mesh stainless steel screen  
0.3 – 0.5 mil emulsion

##### Settling:

A settling time of 10 – 15 minutes is recommended. Parts should be dried as soon as possible after the setting 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

Fired: 8 – 10 μm

##### Thinner

RV-507

##### Warranty

Material guaranteed to meet specifications for 6 months from date of shipment.

##### Storage

Store in a dry location at 5 °C – 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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