

## **Technical Data Sheet**



## THICK FILM MATERIALS

# Product Type: Conductors Product Name: C5730

## (No

Pb and Cd Free Gold Conductor

## Description

C5730 is a Pb, Ni and Cd free, gold conductor paste that has been formulated for use with Al or Au wire bond applications on Al2O3 and AlN.

## Key Benefits

- Excellent AI and Au bondability
- High conductivity
- Good adhesion on Al<sub>2</sub>O<sub>3</sub> and AIN

## 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

 $150\ ^{\circ}\mathrm{C}$  for 10 minutes Make sure ventilation is sufficient to prevent the wet film from skinning

## Firing

 $850 \,^{\circ}\text{C}$  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.

## Heraeus

## **Technical Data Sheet**



Pb and Cd Free Gold Conductor

#### Typical Properties

## Resistivity

 $\leq$  5.5 m $\Omega/\Box$ at 12 µm fired film thickness using 25 mil wide serpentine conductor pattern

### Coverage

 $72.0-75.0\ cm^2/g$  at  $22-25\ \mu m$  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 % AI, 1 % Si, Elongation 0.5 - 1.5 % Initial:  $\geq 8$  g \* Note: All failures were wire breaks

10 mil Wire 99.88 % AI, Elongation 15 - 21.5 % Initial:  $\geq 250$  g

## Au Wire Bondability

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

## Solids

85.5 ± 1.5 %

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

#### Asia Pacific

Phone +65 6571 7649 electronics.apac@heraeus.com

#### China

Phone +86 53 5815 9601 electronics.china@heraeus.com

Europe, Middle East and Africa Phone +49 6181 35 4370 electronics.emea@heraeus.com

The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (datest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied to on the condition that the user shall conduct tests to determine materials suitability for particular applications.