

## Technical Data Sheet

### THICK FILM MATERIALS

**Product Type:** Conductors

**Product Name:** C 5909P



#### Gold Hole Plug

#### Description

C 5909P is a screen printable, gold paste designed as a hole plug in alumina substrates. The high solids loading allows for excellent filling properties. C 5909P has low shrinkage, which allows for a complete fill of the through hole.

#### Key Benefits

- REACH<sup>1</sup> and ROHS<sup>2</sup> compliant
- High solids loading
- Low shrinkage
- For use in a print process

#### Typical Properties

##### Viscosity

350 – 450 Kcps Brookfield HBT  
SC4-14 spindle and 6R utility cup  
at 10 rpm, 25 °C

##### Solids

94.5 ± 1.0 %

##### Resistivity

≤ 25.0 mΩ/□ at 25 μm fired film thickness

If C 5909P is to be used in a mixed metal circuit, a barrier material must be used. The recommended process materials are listed below:

Step	1) C 5909P	Gold Hole Plug
Step	2) C 4003	Barrier Conductor
Step	3) C 8710	*Ag Bottom Conductor
Step	4) C 5789	Gold Top Conductor

\* Print over barrier interface

#### Recommended Processing Guidelines

Hole sizes from 6 – 12 mil diameter  
Squeegee durometer: 60 – 70  
Squeegee speed: slow to medium  
Print mode: contact and alternate direction  
Passes: 4 – 5 alternate print passes

Note: A tissue should be placed between the substrate and the work holder for the purpose of evacuating air and solvent for the hole.

#### Application

Stencil printing process  
3 – 5 mil stencil thickness

#### Drying

150 °C for 15 minutes

#### Firing

850 °C peak temperature  
Dwell time 8 – 12 minutes

#### 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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