

## Technical Data Sheet

### THICK FILM MATERIALS

Product Type: Conductors

Product Name: C4729



Silver/Platinum Conductor

#### Description

C4729 is a Pb, Ni and Cd free Ag/Pt conductor, designed for automotive applications. C4729 is a new member of Heraeus' line of lead free conductors with excellent fired film density, high conductivity, good solder leach resistance, excellent aged adhesion and aluminum wire bondable.

#### Key Benefits

- REACH<sup>1</sup> and ROHS<sup>2</sup> compliant
- Free of Pb, Cd and Ni
- Excellent aged adhesion
- Dense fired film
- Good Al wire bond adhesion (initial and aged)

#### Typical Properties

##### Resistivity

≤ 5 mΩ/□ at 12 μm fired film thickness

##### Viscosity

120 – 180 Kcps, Brookfield HBT  
SC4-14 spindle and 6R utility cup at 10 rpm, 25 °C

##### Solderability

80 x 80 mil pad  
Sn62/Pb36/Ag2 at 230 ± 5 °C  
5 ± 1 sec. dip, RMA flux  
≥ 95 % solder coverage

##### Solder Leaching

\*\* (10 sec dips)

	# of Dips**	% Line Lost
Sn62/Pb36/Ag2	1	≤ 10 %
230 °C, RMA flux	3	≤ 15 %

##### Adhesion

80 x 80 mil pad  
Sn62/Pb36/Ag2 at 230 ± 5 °C  
Forced air box oven  
Initial ≥ 5.0 lbs  
1,000 hours at 150 °C ≥ 4.0 lbs

##### Solids

79.5 ± 1.0 %

##### Wire Bond Adhesion

10 mil Al wire  
99.999 % Al, Elongation > 5 %  
5 x 850 °C firing  
Initial ≥ 500 grams  
1,000 hours at 150 °C ≥ 450 grams

#### Recommended Processing Guidelines

##### Printing

230 – 325 mesh stainless steel screen  
0.5 mil emulsion

##### Drying

150 °C for 10 minutes

##### Firing

850 °C peak temperature  
Dwell time of 10 – 12 minutes  
Total cycle time of 36 – 60 minutes

##### Film Thickness

Wet: 34 – 42 μm  
Dried: 23 – 27 μm  
Fired: 10 – 14 μm

##### 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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