

## 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

- Free of Pb, Cd and Ni
- Excellent aged adhesion
- Dense fired film
- Good Al wire bond adhesion (initial and aged)

#### 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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#### 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

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