

## Conductors

### C4729



### Silver/Platinum Conductor

**Description:**

C4729 is a lead, nickel and cadmium 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**

- Lead, nickel and cadmium free
- Excellent aged adhesion
- Dense fired film
- Good Al wire bond adhesion (initial and aged)

● **Typical Properties:**

**Resistivity:**

≤ 5 milliohms per square  
at 12 microns fired film thickness.

**Viscosity**

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

**Solderability:**

80 x 80 mil pad  
62Sn/36Pb/2Ag @ 230°C ± 5°C  
5 ± 1 sec. dip  
RMA flux  
≥ 95% solder coverage

**Solder Leaching:**

\*\* (10 sec dips)

|                 | <u>#of Dips**</u> | <u>% Line Loss</u> |
|-----------------|-------------------|--------------------|
| Sn62/Pb36/Ag2   | 1                 | ≤ 10%              |
| 230°C, RMA flux | 3                 | ≤ 15%              |

**Adhesion:**

80 x 80 mil pad  
62Sn/36Pb/2Ag @ 230°C ± 5°C  
Forced air box oven  
Initial: ≥ 6 lbs  
1,000 hours @ 150°C: ≥ 4 lbs

**% Solids:**

79.5 ± 1%

**Wire Bond Adhesion:**

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

● **Recommended Processing Guidelines:**

**Printing:**

230 - 325 mesh stainless steel screen.  
0.5 mil emulsion

**Drying:**

Dry at 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 microns  
Dried: 23 - 27 microns  
Fired: 10 -14 microns

**Thinner:**

RV-372 (Terpineol)

**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.

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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 (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for a particular application.

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