

## Technical Data Sheet



**Product Type:** Conductors

**Product Name:** C2180



**Pb and Cd Free Silver/Palladium Conductor**

### Description

C2180 is an 8:1 Ag/Pd conductor which is Pb, Cd and Ni free designed for automotive applications with similar electrical and mechanical properties to a 6:1 Ag/Pd conductor. The C2180 conductor is suitable for a wide variety of applications where low cost and excellent performance are required. It exhibits excellent solderability, aged adhesion properties and is aluminium wire bondable.

### Key Benefits

- Low cost
- Excellent solderability and leach resistance
- Excellent long term adhesion
- Pb, Cd and Ni free
- Good Al wire bond adhesion (initial and aged)
- REACH<sup>1</sup> and ROHS<sup>2</sup> compliant

### Typical Properties

#### Resistivity

15 – 20 mΩ/□ at 12 μm fired film thickness

#### Viscosity

200 – 280 Kcps Brookfield HBT  
SC4 – 14 spindle, 6R utility cup at 10 rpm, 25 °C

#### Solids

80.0 ± 1.5 %

#### Solderability

Sn62/Pb36/Ag2 at 230 °C, RMA flux  
100 % for 5 second dip

#### Solder Leaching

Sn62/Pb36/Ag2 at 225 °C, RMA flux  
≥ 4 dips (10 seconds for each dip)

#### Adhesion

80 x 80 mil pad  
Sn62/Pb36/Ag2 at 225 – 230 °C  
Forced air box oven

Initial: ≥ 6.0 lbs  
1000 hours @ 150 °C: ≥ 5.0 lbs

#### Wire Bond Adhesion

10 mil Al wire, 99.999 % Al, Elongation > 5 %  
5 x 850 °C firing  
Initial: ≥ 400.0 g  
1000 hours @ 150 °C: ≥ 400.0 g

### Recommended Processing Guidelines

#### Printing

280 – 325 mesh stainless steel screen  
0.5 mil emulsion  
Allow to level at room temperature for 5 – 10 minutes before drying

#### Printing Speed

Up to 7 in/sec

#### Coverage

80 cm<sup>2</sup>/g at 12 μm fired film thickness

#### Drying

150 °C for 10 to 15 minutes

#### Firing

850 °C peak temperature  
10 minutes at peak  
Total cycle time 30 – 60 minutes

#### Film Thickness:

Wet: 35 – 37 μm  
Dried: 22 – 24 μm  
Fired: 10 – 15 μm

#### Line Definition:

≥ 6 mils (150 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)

**Heraeus Electronics**  
Heraeus Deutschland GmbH & Co. KG  
Heraeusstraße 12 – 14  
63450 Hanau, Germany  
[www.heraeus-electronics.com](http://www.heraeus-electronics.com)

**Americas**  
Phone +1 610 825 6050  
[electronics.americas@heraeus.com](mailto:electronics.americas@heraeus.com)

**China**  
Phone +86 21 3357 5457  
[electronics.china@heraeus.com](mailto:electronics.china@heraeus.com)

**Asia Pacific**  
Phone +65 6571 7677  
[electronics.apac@heraeus.com](mailto:electronics.apac@heraeus.com)

**Europe, Middle East and Africa**  
Phone +49 6181 35 3069, +49 6181 35 3627  
[electronics.emea@heraeus.com](mailto:electronics.emea@heraeus.com)