

## Technical Data Sheet



### THICK FILM MATERIALS

**Product Type:** Conductors

**Product Name:** C2140



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

#### Description

C2140 is a Pb, Cd and Ni free Pd/Ag composition designed for applications where more leach resistance is required. The C2140 conductor is suitable for a wide variety of applications such as automotive electronics, power hybrids and commercial circuits where more stringent requirements exist. It exhibits excellent solderability, aged adhesion and is aluminum wire bondable.

#### Key Benefits

- 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

≤ 30 mΩ/□ at 12 μm fired film thickness

##### Viscosity

180 – 260 Kcps Brookfield HBT  
SC4 – 14 spindle, 6R utility cup at 10 rpm, 25 °C

##### Solids

78.75 ± 0.75 %

##### Solderability

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

##### Solder Leaching

Sn62/Pb36/Ag2 at 225 °C, RMA flux  
≥ 5 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  
48 hours @ 150 °C: ≥ 4.0 lbs

#### 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

75 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  
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)

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