

Conductors

C2160B



Pb and Cd Free Silver/Palladium Conductor

Description:

C2160B is a lead, cadmium and nickel free Pd/Ag composition designed for hybrid applications and application where more leach resistance is required. The C2160B conductor is suitable for a wide variety of applications such as automotive electronics, power hybrids and commercial applications where more stringent requirement exist. It exhibits excellent solderability, aged adhesion properties and is aluminum wire bondable.

● Key Benefits:

- Pb, Cd and Ni Free
- Excellent solderability and leach resistance
- Excellent long term adhesion
- Good Al wire bond adhesion (initial and aged)

Typical Properties

Resistivity:

10 - 20 milliohms per square at 12 microns fired film thickness

Viscosity:

150 – 220 Kcps, Brookfield HBT, SC4-14 spindle and 6R utility cup at 10 rpm, 25°C

Solderability:

95.5Sn/3.5Ag/0.5Cu
@ 255°C, RMA flux
100% for 5 second dip

Solder Leaching:

95.5Sn/3.5Ag/0.5Cu
@ 255°C, RMA flux
≥ 3 dips (10 seconds for each dip)

Solids:

79 ±1.0%

Adhesion:

80 x 80 mil pad
95.5Sn/3.5Ag/0.5Cu
@ 255°C

Forced air box oven

Initial	≥ 4.0 lbs
1,000 hours @ 150°C	≥ 3.0 lbs

Wire Bond Adhesion:

10 mil Al wire
99.999% Al, Elongation > 5%
5 x 850°C firing

Initial	> 450 gms
1,000 hours @ 150°C	> 400 gms

● Recommended Processing Guidelines:

Printing:

280 - 325 mesh, 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 cm²/gram at 12 microns fired film thickness

Drying:

Dry at 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 microns
Dried:	20 - 24 microns
Fired:	10 - 15 microns

Line Definition:

≥ 6 mils (150 microns)

Thinner:

RV-372 (Terpineol)

Warranty:

Material guaranteed to meet specifications for 6 months from date of shipment.

Storage:

Store in a cool, dry, dark place (@ 5-25°C), with the container tightly shut. When stored in refrigeration, allow ample time for paste to come to room temperature before opening the jar to avoid condensation. 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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