

Conductors

C4303M

Silver/Palladium Conductor

Description:

C4303M Pd/Ag Conductor paste exhibits high density, high reliability and good fine line definition, (5mil lines and spaces). It fires to a smooth surface and is mechanically durable and chemically resistant. Conductivity, leach resistance, and resistance to silver migration are exceptional. Due to these characteristics, C4303M is a frequently preferred material for fuel sensor applications, particularly in automobiles.

● **Key Benefits:**

- Exceptional silver migration resistance
- Smooth fired surface
- Excellent solderability and leach resistance

● **Typical Properties:**

Resistivity:

≤ 50 milliohms/sq @ 12 microns fired film thickness

Viscosity:

150-200 kcps
Brookfield HBT, SC4-14 spindle and 6R utility cup at 10 rpm, @25°C

Solder Acceptance:

62Sn/36Pb/2Ag @ 225°C
RMAflux, 5 sec. dip
100%

Leach Resistance:

62Sn/36Pb/2Ag @ 225°C
RMA flux
> 90%, 2 x 10 second dips

Adhesion:

80 x 80 mil pad
62Sn/36Sn/2Ag @ 225°C
RMA flux
≥ 4.5 lbs

Solids:

83.1 ± 1%

● **Recommended Processing Guidelines:**

Printing:

280-325 mesh screen
0.5 mil emulsion, 1.1 mil wire
Let the print level at room temperature for 10 minutes before drying.
Printing speeds capable up to 6 in/sec.

Drying:

Dry at 150°C for 10 minutes

Firing:

850°C peak for 10 minutes,
with a total cycle time of 30-60 minutes.

Thickness:

Dried: 15-18 microns
Fired: 10-12 microns

Line Definition:

≥ 5 mils (125 microns)

Thinner:

RV-372 (Terpineol)

Coverage:

84 cm²/g

Warranty:

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

Storage:

Store in a dry cool and dark 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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