

Conductors

C4499



Pb Free Silver Via Fill

Description:

C4499 is a screen printable silver via fill conductor designed for use in multilayer hybrids. It is designed to be used with either IP9117 or IP9118 dielectrics. It gives excellent surface coplanarity along with good electrical conductivity.

● **Key Benefits:**

- Outstanding adhesion to dielectric
- Excellent surface coplanarity
- Good electrical conductivity
- Easy to process
- Ideal interface for Ag bearing conductors

● **Typical Properties:**

Metal Type:

Silver

Resistivity:

≤ 5 milliohms per square
at 21 microns fired film thickness

Thermal Cycling:

-50 to 125 °C
100 cycles
Δ contact resistance: < 2%

Coverage:

89 cm²/g

Viscosity:

140-200 Kcps; Brookfield HBT SC4-14 spindle and 6R utility cup @ 10 rpm, 25°C.

Solids:

85.25 ± 2%

● **Recommended Processing Guidelines:**

Processing Sequence:

The following print sequence is recommended:

Print bottom Conductor/Dry/Fire
Print/Dry/Fire Dielectric
Print/Dry/Fire Dielectric
Print C4499/Dry
Print/Dry/Fire Dielectric
Print top Conductor/Dry/Fire

Printing:

325 mesh stainless steel screen
0.5 mil emulsion screen
1.1 mil wire

Drying:

Dry at 150°C for 10 minutes

Firing:

850°C peak temperature
Dwell time of 8-12 minutes

Thinner:

RV-372 (Terpineol)

Compatibility:

Conductors: All Heraeus Ag, Ag/Pt, and Ag/Pd Conductors.
Dielectrics: IP9118, IP9117

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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