

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: C7257



Nitrogen Fireable Copper Conductor

Description

C7257 copper conductor is a practical alternative to precious metal materials in many applications. The advanced powder technology in C7257 results in improved fired film properties.

Key Benefits

- REACH¹ and ROHS² compliant
- Exceptionally high conductivity
- Migration resistant
- Low cost
- Leach resistant

Typical Properties

Resistivity

≤ 2.6 mΩ/□ at 13 μm fired film thickness

Adhesion

80 x 80 mil pad

Sn62/Pb36/Ag2 at 230 °C,

RMA flux

Initial ≥ 5.0 lbs

Aged ≥ 3.0 lbs (48 hours at 150 °C)

Solderability

Sn63/Pb37 at 230 °C

5 sec. dip, RMA flux

> 95 %

Solder Leaching

Sn63/Pb37 at 230 °C

RMA flux

| | 10 sec Dips | % Line Lost |
|---------------------|-------------|-------------|
| Sn63/Pb37 at 230 °C | 3 | ≤ 5 % |
| RMA flux | 6 | ≤ 10 % |

Coverage

100 cm²/g at 13 μm fired film thickness

Viscosity

135 – 165 Kcps, Brookfield HBT

SC4-14 spindle at 10 rpm, 25 °C

Solids

90.0 ± 1.0 %

Recommended Processing Guidelines

Printing

280 mesh stainless steel screen

0.5 mil emulsion

Drying

125 °C for 15 minutes

Firing

Fire in Nitrogen and O₂ between 2 -10 ppm

900 – 925 °C peak

Dwell time of 9 – 11 minutes

Typical rise time of 20 – 23 minutes

(measured from 100 °C entry point)

Total cycle time of 50 – 65 minutes

Line Resolution

8 mils (200 μm)

Thickness

Dried:

24 – 30 μm

Fired:

11 – 15 μm

Thinner

RV-507

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)

* See the data sheet issue date (DD/MM/YY) as reference of validity of latest edition which is available on request

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