THICK FILM MATERIALS

Product Type: Conductors

Product Name: C 7462

Fine Line, ENIG Plateable Copper Conductor

Description
C 7462 is a copper conductor paste designed for screen printing application on alumina substrates where ENIG plating is required. It has the capability to print 100 µm lines and spaces using 280 or 325 mesh screens with 0.2 to 0.5 emulsion.

Key Benefits
- REACH® and ROHS® compliant
- Exceptionally high conductivity
- Migration resistant
- ENIG plateable on alumina

Typical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistivity</td>
<td>≤ 1.75 mΩ/□ at 25 µm fired film thickness</td>
</tr>
<tr>
<td>Adhesion</td>
<td>80 x 80 mil pad ENIG plated SAC 305 at 245 °C RMA flux Initial ≥ 5.0 lbs Aged ≥ 5.0 lbs (48 hours at 150 °C)</td>
</tr>
<tr>
<td>Solderability</td>
<td>ENIG plated SAC 305 at 245 °C 5 sec dip, RMA flux &gt; 95%</td>
</tr>
<tr>
<td>Coverage</td>
<td>55 cm²/g at 25 µm fired film thickness</td>
</tr>
<tr>
<td>Viscosity</td>
<td>150 – 220 Kcps, Brookfield HBT, SC4 – 14 spindle and 6R cup at 10 rpm, 25 °C</td>
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<tr>
<td>Solids</td>
<td>90.0 ± 1.5 %</td>
</tr>
</tbody>
</table>

Recommended Processing Guidelines

Printing
280 – 325 stainless steel mesh screen 0.2 – 0.5 mil emulsion
Allow to level at room temp for 2 – 3 minutes

Drying
125 °C for 10 minutes

Firing Profile
Fire in Nitrogen with O₂ between 2 – 10 ppm 925 °C peak Dwell time of 8 – 10 minutes Typical rise time of 20 – 23 minutes (measured from 100 °C entry point) Total cycle time of 50 – 65 minutes

Line Resolution
≥ 4 mils (100 µm)

Thickness
Dried 40 – 50 µm Fired 20 – 25 µm

Thinner
RV-507

Warranty
TBD

Storage
Store in a dry location at 5 – 25 °C.
DO NOT REFRIGERATE.
Allow paste to come to room temperature prior to opening. Materials should be mixed thoroughly before using, as settling may occur during storage.
Technical Data Sheet

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