

## Technical Data Sheet

### THICK FILM MATERIALS

**Product Type:** Conductors

**Product Name:** C7847

# CELCION

Low Temperature Copper Conductor



#### Description

C7847 is a low firing Cd and phthalate free copper conductive paste. It was developed for use with IP6075 and SM1000. It exhibits excellent adhesion and solderability

#### Key Benefits

- REACH<sup>1</sup> and ROHS<sup>2</sup> compliant
- Lead, cadmium and nickel free
- Low firing temperature
- Compatible with Celcion<sup>®</sup> system of materials

#### Typical Properties

##### Resistivity

≤ 4.0 mΩ/□ at 25 μm fired film thickness

##### Adhesion

80 x 80 mil pad on IP6075  
SAC 305 at 225 °C  
RMA flux  
Initial: ≥ 5.0 lbs

##### Solderability

SAC 305 at 225 °C  
5 sec. dip, RMA flux  
≥ 95 % coverage

##### Leach Resistance

SAC 305 at 225 °C  
5 sec. dip, RMA flux  
≤ 5 % loss

##### Coverage

60 cm<sup>2</sup>/g at 35 μm wet thickness

##### Viscosity

60 – 100 Kcps, Brookfield HBT  
SC4 – 14 spindle and 6R utility cup at 10 rpm, 25 °C

##### Solids

85.0 – 88.0 %

#### Recommended Processing Guidelines

##### Printing

250 – 280 mesh stainless steel screen  
0.5 mil emulsion

##### Drying

125 °C for 10 minutes

##### Firing Profile

550 – 600 °C peak temperature  
Dwell time of 5 – 7 minutes  
Oxygen content 1 – 5 ppm

##### Line Definition

≥ 10 mil lines and spaces

##### Thickness

Fired: 18 – 26 μm

##### Compatibility

IP6075 – Pb Free Dielectric on Al Substrates  
SM1000 – White Solder Mask

##### 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 have occurred 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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