

## Conductors

### CL50-9158



## Pb and Cd Free Thin Print Gold Conductor

### Description:

CL50-9158 is a cadmium and lead free, gold conductor paste that has been formulated to print thin and to have good Au wire bond adhesion.

### ● Key Benefits

- Excellent Au wire bondability
- Low fired film thickness
- Cadmium and lead free

### ● Typical Properties:

#### Resistivity:

< 5.5 milliohms per square  
at 5 microns fired film thickness using 25 mil wide serpentine conductor pattern

#### Line Definition:

200 micron lines and spaces (8 mils)

#### Viscosity:

250-350 kcps, Brookfield HBT, Sc 4-14 spindle and 6R utility cup @ 10 pm, 25 °C

#### Au Wire Bondability:

1 mil Wire  
99.99% Au, Elongation 3-5%  
Initial: > 8 grams

#### % Solids:

58 - 60%

#### Coverage:

189 cm<sup>2</sup>/gm

### ● Recommended Processing Guidelines

#### Printing:

325 - 400 mesh  
1.2 mil wire  
45° angle  
0.6 mil emulsion

#### Print Speed:

> 4 in/sec (> 10 cm/sec)

#### Settling:

A settling time of 10-15 minutes is recommended. parts should be dried as soon as possible after the setting period, (within 20 minutes), so the paste does not skin over. Parts should not be left out for long periods of time before drying. This allows the paste to skin over and can compromise adhesion. Wet parts should be covered if not dried right away.

#### Drying:

Dry at 150°C for 10 minutes  
Make sure ventilation is sufficient to prevent the wet film from skinning.

#### Firing:

850°C peak temperature,  
10 minutes at peak  
Total cycle time of 45 - 60 minutes

#### Thicknesses:

Dried: 5 -7 microns  
Fired: 1.5 - 3 microns

#### Thinner:

RV-372 (Terpineol)

#### 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.

#### Warranty:

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

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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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