

## Technical Data Sheet

### THICK FILM MATERIALS

**Product Type:** Component Metallizations

**Product Name:** LP11-4493



#### Platinum Conductor

##### Description

LP11-4493 is a Pb free fritted platinum paste, which fires to pure metal surface. This material is particularly suited for poorly controlled firing atmospheres and profiles.

##### Key Benefits

- REACH<sup>1</sup> and ROHS<sup>2</sup> compliant
- Chemically resistant
- Can be used on alumina, zirconia or titania bodies

##### Typical Properties

###### Resistivity

≤ 50 mΩ/□ at 12 μm fired film thickness

###### HTCR / CTRC (ppm/°C)

< 3400 / < 3600

###### Adhesion

80 x 80 mil pad on alumina at 950 °C  
Sn62/Pb36/Ag2 at 235 °C, RMA flux  
Initial: > 1.5 lbs  
100 Hrs. at 150 °C ≥ 2.0 lbs

Sn10/Pb88/Ag2 at 365 °C, RMA flux  
Initial: > 4.0 lbs  
100 Hrs. at 150 °C ≥ 4.0 lbs

###### Solderability

Sn62/Pb36/Ag2 at 235 °C and  
Sn10/Pb88/Ag2 at 365 °C,  
5 sec. dip, RMA flux, 80 x 80 mil pad  
> 85 %

###### Solder Leaching

Sn62/Pb36/Ag2 at 235 °C and  
Sn10/Pb88/Ag2 at 365 °C,  
RMA flux, 80 x 80 mil pad  
> 20 % loss after 6 x 10 sec. dips

###### Viscosity

5.5 – 10.3 Kcps, Paar physica cone and plate  
at 300/s, 25 °C

###### Solids

85.25 ± 0.25 %

##### Recommended Processing Guidelines

###### Printing

280 – 325 mesh stainless steel screen  
0.5 mil emulsion

###### Drying

90 – 150 °C peak temperature  
Cycle time of 10 minutes

###### Firing

840 – 950 °C peak temperature  
Dwell time of 9 – 11 minutes

###### Thickness

Dried: 18 – 20 μm  
Fired: 11 – 13 μm

###### Thinner

Heraeus RV-372

###### 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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