

Technical Data Sheet



THICK FILM MATERIALS

Product Type: Dielectrics

Product Name: IP9246



Nitrogen Fireable Dielectric for Aluminum Nitride

Description

IP9246 is Pb, Cd, and Ni free high temperature dielectric that can be fired in nitrogen. It is compatible with a variety of thick print copper pastes. It has a low thermal expansion coefficient allowing for applications which utilize aluminum nitride.

Key Benefits

- REACH¹ and ROHS² compliant
- Nitrogen fireable
- Low thermal expansion coefficient (CTE)

Typical Properties

Dielectric Constant

6.0 – 9.0 at 1 KHz

Dissipation Factor

< 0.5 % at 1 KHz

Insulation Resistance

> 10⁹ Ω at 100 V DC

Breakdown Voltage

> 1000 V DC per mil (3 individually fired layers)

Viscosity

40 – 60 Kcps, Brookfield RVT, SC4-14 spindle with 6R utility cup at 10 rpm, 25 °C

Solids

74.0 ± 2.0 %

Recommended Processing Guidelines

Printing

200 – 280 mesh stainless steel screen
0.5 mil emulsion

Allow wet prints to level at room temperature for 5 minutes

Drying

150 °C for 10 minutes

Firing

925 - 950 °C peak temperature
Dwell time of 10 minutes

Thickness

Fired: 15 – 20 μm (1 layer)
40 – 75 μm (3 layers)

Thinner

Heraeus RV-372

Warranty

TBD

Storage

Store in a dry location at 20 – 25 °C with container lid safely fastened.

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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