

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Dielectrics

Product Name: IP9217



Lead Free Multilayer Dielectrics

Description

IP9217 is a blue 850° C firing dielectric composition which produces an extremely dense, hermetic fired film. IP9217 is compatible with a wide variety of Au and Ag conductors and resistor systems. Its unique glass system eliminates blistering in multilayer applications.

Key Benefits

- REACH¹ and ROHS² compliant
- Excellent electrical properties
- Good adhesion of Au conductors
- Superior properties when resistors are used in multilayer applications
- Eliminates “Battery effect”
- Free of Pb and Cd

Typical Properties

Via Resolution

200 µm (8 mil)

Dielectric Constant

8.5 – 11.5 at 1 KHz

Dissipation Factor

< 0.5 % at 1 KHz

Insulation Resistance

> 10¹¹ Ω at 100 V DC

Breakdown Voltage

> 500 V DC per mil

Coverage

100 cm²/g at 50 µm wet film thickness

Viscosity

230 – 330 Kcps, Brookfield HBT, SC4-14 spindle with 6R utility cup at 10 rpm, 25 °C

Solids

75.0 ± 1.0 %

Recommended Processing Guidelines

Printing

280 mesh stainless steel screen
 0.5 mil emulsion thickness
 For via geometries < 15 mils, use a 325 mesh screen.
 Three individually fired layers with a total thickness of at least 40 µm will be necessary to achieve the optimum performance level.
 Allow wet prints to level at room temperature for 5 minutes.

Drying

150 °C for 10 minutes

Firing

850 °C peak temperature
 Dwell time of 10 minutes

Thickness

Dried: 21 µm
 Fired: 15 µm
 > 40 µm (3 fired layers)

Thinner

RV-507

Warranty

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

Storage

Store in a dry location at 5 – 10 °C to ensure proper performance of shelf life.

Allow paste to come to room temperature prior to opening. Spatulate well before using.

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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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