

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

- 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

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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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

> 10^{11} Ω at 100 V DC

Breakdown Voltage

> 500 V DC per mil

Coverage

100 cm^2/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 \pm 1.0 %

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