

## Dielectrics

### IP9217



## Lead Free Multilayer Dielectric

#### 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"
- Pb and Cd free

#### ● Typical Properties:

##### Via Resolution:

200 microns (8 mil)

##### Dielectric Constant:

8.5-11.5 @ 1KHz

##### Dissipation Factor:

< 0.5% @ 1KHz

##### Insulation Resistance:

> 10<sup>11</sup> ohms @ 100 D.C

##### Breakdown Voltage:

> 500 VDC per mil

##### Coverage:

100 cm<sup>2</sup>/g @ 50µm wet film thickness

##### Viscosity:

230 - 330 Kcps  
Brookfield HBT, SC4-14 spindle with 6R utility cup  
@ 10 RPM, 25°C

##### Solids:

75.0 ± 1.0%

#### ● Recommended Processing Guidelines:

##### Printing:

280 mesh screen.

0.5 mil emulsion.

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:

Dry at 150°C for 10 minutes

##### Firing:

850°C peak temperature

Dwell time of 10 minutes.

##### Thickness:

Dried: 21 microns

Fired: 15 microns

> 40 microns

(3 fired layers)

##### Thinner:

RV-507 (Texanol)

##### Warranty:

Material guaranteed to meet specifications for 4 months from date of shipment.

##### 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

YY1010.5

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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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