

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Dielectrics

Product Name: IP2109



Lead Free and Acid-Resistant Overglaze

Description

IP 2109 is a lead free, screen printable, overglaze paste for different purposes, especially for protecting thick film resistors or conductors. Because of the high firing temperature it fires to a transparent green colour and very dense glaze layer which is highly passivated to withstand abrasion and aggressive media occurring in plating processes.

Key Benefits

- Extremely resistant vs plating solutions eg. Ni baths with pH values of 4 – 5 and H₂SO₄ baths with pH values <1. It is also resistant to alkaline solutions with pH value of ≤ 9
- Excellent compatibility with different HERAEUS resistors and conductors on alumina and dielectrics
- Free of lead, cadmium, nickel and phthalate

Processing

- 1) Spatulate well prior to processing.

When stored in a refrigerator allow paste to come to room temperature prior to opening, to avoid condensation.
- 2) Print through 200 – 325 mesh stainless steel screen.
- 3) Let the print level at room temperature for 10 minutes.
- 4) Dry at 150 °C for 10 minutes.
- 5) Fire at 850 °C (peak) for 10 – 12 minutes, and with a total firing cycle time of 30 – 60 minutes.

Thinner

HVS 507

Typical Properties (Paste)

Form	Pseudoplastic paste
Viscosity	20 – 40 Pas (23 °C, D = 33/s)
Solid Content	70.0 % ± 1.0 %
Shelf Life	6 months from date of shipment with correct storage (in a dry, cool (5 – 25 °C) and dark place with container tightly shut).

Typical Properties (Fired)¹

Breakdown Voltage ²	> 1500 V (AC)
Colour	Green, transparent

Compatibility

Dielectrics	IP 9117 Series IP 9227
Conductors	Ag C 8729H C 1075S (LPA 409-021) AgPt C 4728H C 1076SD (LPA 609-022) Au C 5729
Resistor	R 2100 Series

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Legend:

¹⁾ Typical properties based on laboratory test methods. For optimum results all materials should be fired in a profiled furnace supplied with dried, hydrocarbon and other contaminant free air (PP-1).

²⁾ Measured after printing with a 200 µm steel screen; thickness of screen and emulsion combined was c. 60 µm, and the resultant printed track was 500 µm wide.

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