

DuPont 5707

CROSSOVER DIELECTRIC

Technical Data Sheet

Product Description

DuPont 5707 is a screen printable dielectric for use in single layer circuits as a crossover between conductor lines.

Product Benefits

- Compatible with most silver/palladium and gold conductors
- High Reliability

Processing Substrates

Properties are based on test using 96% alumina substrates. Substrates of other compositions and from various manufacturers may result in variations in performance properties.

Printing

Print individual dielectric layer with a 200- or 325-mesh stainless steel screen. The combined thickness of the fired dielectric should be at least 40 μm . Three separate printing of 5707 may be necessary to achieve this fired thickness when 325-mesh screens are used. It will print up to 25 cm/s. Use a double wet squeegee pass to minimize pinholes.

Drying

Allow wet print to level for 5-10 minutes at room temperature. Dry 10-15 minutes at 150°C.

Firing

Each dielectric print should be fired separately in a belt furnace. Use a 60-minute cycle with a peak temperature of 850°C for 10 minutes.

Typical Physical Properties

Test	Properties
Fired Thickness (μm) 2 fired layers, 200-mesh screen 3 fired layers, 325-mesh screen	40 - 45 45 - 50
Dielectric Constant (K)	8 - 10
Dissipation Factor(%)	< 0.5
Insulation Resistance (ohms at 100 VDC)	> 10^{12}
Breakdown Voltage (VDC/25 μm)	> 400 (1.0 mil)
Composition Properties	
Viscosity (Pa.s) (Brookfield HST, UC&SP, 10 rpm, 25°C)	150-200
Coverage ¹ , cm ² /g	60-70
Thinner	DuPont 8672

This table shows anticipated typical physical properties for DuPont 5707 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

Storage and Shelf Life

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature (<25°C). Shelf life of material in unopened containers is six months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

Safety and Handling

For Safety and Handling information pertaining to this product, read the Material Safety Data Sheet (MSDS).

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