

DuPont 5951

MULTILAYER DIELECTRIC

Technical Data Sheet

Product Description

DuPont 5951 Dielectric is a multilayer interconnect dielectric. DuPont 5951 is part of a thick film ink system for building smaller multilayer interconnect circuits with up to seven metal levels.

Processing Printing

Use a 325-mesh screen. Print, dry, and fire three layers of dielectric (via filling after the first and third layers) to achieve a total dielectric thickness of 40-50 μm between metal levels. Single wet-pass printing is possible.

Drying

Allow print to level for 5-10 minutes before drying at 150°C for 15 minutes.

Firing

Fire each dielectric print after drying. Use a 30-minute profile with an 850°C peak temperature held for 10 minutes.

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).

Typical Physical Properties

Test	Properties
Fired Thickness (μm) (3 fired layers)	40 - 60
Breakdown Voltage (VDC/mil)	> 700 (minimum)
Dielectric Constant	6 - 10
Dissipation Factor (%)	≤ 0.5
Insulation Resistance (Ω @ 100VDC)	$> 10^{11}$
Via Retention	12 mil nominal
Composition Properties	
Viscosity (Pa.S) Brookfield HBT, UC&SP, 10 rpm, 25°C)	220 - 295
Thinner	DuPont 9179

This table shows anticipated typical physical properties for DuPont 5951 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

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