

DuPont CB028

SILVER CONDUCTOR

Technical Data Sheet

Product Description

DuPont CB028 silver conductor is used to provide electromagnetic interference/radio frequency interference (EMI/RFI) shielding on-board or to fabricate low-voltage circuitry, on rigid or flexible substrates. It can be used with manual or automatic screen printing equipment.

Product Benefits

- Superior conductivity
- Fine line printing capability
- Excellent flexibility

Processing

Screen Printing Equipment

Reel-to-reel, semi-automatic, manual

Ink Residence Time on Screen

> 1 hr

Screen Types

Stainless steel, polyester

Typical Cure Conditions

Box Oven: 160°C (320°F) for 60 min

Typical Circuit Line Thickness Printed with 200-mesh stainless steel screen

8-10 microns

Clean up Solvent

Ethylene diacetate or methyl propyl acetate

Substrate

Epoxy glass, Mylar and DuPont™ Kapton® polyimide film

Maximum temperature exposure

Lamination temperature > 175° C may cause delamination of the CB028

Table 1
Typical Physical Properties

Test	Properties
Sheet Resistivity (mΩ/sq/mil)	7 - 10
Resistivity after Flex (mΩ/sq/mil) 15 sec after test crease (180°, 1 cycle)	100
Abrasion Resistance, Pencil Hardness (H) [ASTM D3363-74]	≥ 2
Solderability	Not Recommended
% TML (Total Mass Loss) ASTM 595 (NASA Out gassing, Specification < 1.0%)	0.18
%CVCM (Collectible Volatile Condensable Material) ASTM 595 (NASA Out gassing, Specification < 0.1%)	0.01
Change in Physical Properties after Environmental tests	Insignificant
Change in Electrical properties after Environmental test*, (%)	< 10
Environmental Test A. Thermal Shock (+ 85°C to - 40°C, 30 min each, cycles) B. Dry Heat (+ 85°C, 10 days) C. Humidity (+ 40°C, 95% RH, 10 days) [MIL Std 202E, method 103, cond. A] D. Salt Spray (+ 35°C, 5% salt, 10 days) [ASTM B117] E. Silver Migration (1 V DC/mil gap, + 40°C, 90 % RH, 500 hr., tested on 40-and 7-mil gaps) F. Sulfur Dioxide (+ 45°C, 90% RH, 400 hr, in a 9-liter chamber containing 500 mg of flowers of sulfur)	

These tables shows anticipated typical physical properties for DuPont CB028 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

Table 2
Composition Properties

Test	Properties
Viscosity (Pa.S) [Brookfield HBT, 10 rpm #14 spindle & UC, 25°C]	15 - 30
Coverage ¹ , cm ² /g	120 - 230
Thinner	DuPont 3610
Dependent on print thickness	

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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