DuPont 5085

Silver Carbon Conductive Composition

Product Description

DuPont 5085 is a silver/carbon used to fabricate low-voltage circuitry, especially on flexible substrates. This composition has been specifically designed for applications involving biosensors where high conductivity is not required. DuPont 5085 has also been designed for fast-curing applications.

Product Benefits

- Excellent adhesion to polycarbonate
- Fast cure

Processing

Screen Printing Equipment
Reel-to-reel, Semi-automatic, manual

Substrates
Polyester, polyimide, paper, epoxy glass, Polycarbonate

Ink Residence Time on Screen
> 1 hour

Screen Types
Polyester, stainless steel

Typical Cure Conditions
Box oven: 130°C for 5-6 minutes
Reel-to-reel: 140°C for 1 minute

Typical Circuit Line Thickness Printed with 280-mesh Stainless Steel Screen
8-10 microns

Clean up Solvent
Ethylene glycol diacetate

Table 1 - Typical Physical Properties on 5-mil Polyester Film

Test	Properties
Sheet Resistivity (mΩ/sq/mil)	40 - 120
Resistivity after Flex(mΩ/sq/mil) 15 sec after test Crease (180°, 1 cycle)	< 500
Abrasion/Tape Pull (3M Scotch Tape #810)	No Material Transfer
Abrasion Resistance, Pencil Hardness (H) (ASTM D3363-74)	≥ 1
Operating Use Temperature (°C)	≤ 90
Solder	Not Recommended

Table 2 - Composition Properties

Test	Properties
Viscosity (Pa.S) [Brookfield 1/2 RVT, 10rpm #14 spindle, 25°C]	20 - 50
Solids (750°C) (%)	41.0 - 44.0
Coverage (cm^2/g) [Dependent on screen size and material	140 - 300
Thinner	DuPont 3610

Tables 1 & 2 show anticipated typical physical properties for DuPont 5085 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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Storage and Shelf Life

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature (<25°C). Avoid high heat (>30°C) or freezing. 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 information on health and safety regulations please refer to the specific product MSDS.

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For more information on DuPont 5085 or other DuPont products, please visit our website.

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CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-50102-5 and "DuPont Policy Regarding Medical Applications" H-50103-5..

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