

# DuPont 7102

## Carbon Conductive Composition

### Product Description

DuPont 7102 carbon is used as conductor in designs that tolerate high resistivity. Major benefits include low cost and excellent screen life and high-temp stability. It can be used with semi-automatic and manual printers. DuPont 7102 may be blended with these DuPont compositions to meet specific resistance requirements: DuPont 7082 Carbon, DuPont 5028 Ag and DuPont 3571 Dielectric.

### Product Benefits

- Low resistivity carbon
- High stability
- Superior activity in biomedical applications
- Excellent adhesion to polycarbonate substrates

### Processing

#### Screen Printing Equipment

Semiautomatic, manual

#### Ink Residence Time on Screen

> 2 hours

#### Screen Types

Stainless steel, Polyester

#### Typical Cure Conditions

Box Oven: 120°C for 5 - 6 minutes

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

9 - 15 microns

#### Clean-up Solvent

Ethylene diacetate or methyl propasol acetate

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

Test	Properties
Sheet Resistivity ( $\Omega$ /sq/mil)	20 - 30
Resistivity after Flex ( $\Omega$ /sq/mil) 15 sec after test Crease (180°, 1 cycle)	50
Abrasion Resistance, Pencil Hardness (ASTM D3363-74) [H]	2

**Table 2 - Typical Composition Properties**

Test	Properties
Viscosity (Pa.S) (Brookfield HBT, 10 rpm, #14 spindle & UC, 25°C)	60 - 125
Solids (150°C)(%)	34.5 - 37.5
Coverage (cm <sup>2</sup> /g/mil)	103
Thinner	DuPont 3610

Tables 1 & 2 show anticipated typical physical properties for DuPont 7102 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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For more information on DuPont 7102 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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