

DuPont 7112

Platinum/Carbon Composition

Product Description

DuPont 7112 is a Platinum/Carbon composition designed for working electrodes in biosensor and polymer thick film (PTF) sensors. It provides high signal to noise ratios (high sensitivity) in a multiplicity of designs. It can be used on both flatbed and reel-to-reel manufacturing lines.

Product Benefits

- Good Printability
- High Sensitivity
- Strong Adhesion to a variety of polyethylene terephthalate (PET) substrates

Processing

Screen Printing Equipment

Reel-to-reel, semi-automatic or manual

Ink Residence Time on Screen

2 hours

Screen Types

Polyester, stainless steel

Typical Cure/Drying Conditions

Box Oven: 130°C for 5 - 10 minutes

Reel-to-reel: 140°C for 1 minute

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

8 - 12 microns

Clean-up Solvent

Ethylene diacetate or methyl propyl acetate

Drying

Dry in a well-ventilated box oven or belt/conveyor furnace. Air flow and extraction rates should be optimized to ensure complete removal of solvent from the paste. A strong air flow may help to reduce the drying temperature/time considerable and to achieve the lowest as-printed resistance. Typical drying conditions. Static Box oven: 130°C for 5 - 10 minutes

Table 1 - Typical Cured Properties

Test	Properties
Sheet Resistivity (Ω /sq/mil) cured thickness	200 - 400
Adhesion (Treated PET 5 mil) (B)	5
Abrasion Resistance (H), Pencil Hardness [ASTM D3363-74]	4
Solder	Not Recommended

Table 2 - Typical Composition Properties (on 5 mil Polyester Film)

Test	Properties
Solids % (150°C)	34.0-38.0
Viscosity (Pa.s) [Brookfield RVT, spindle#14, 10rpm, 25°C]	40-80
Coverage (cm ² /g/mil)	152
(sqft/gal/mil)	430
Density (g/cc)	1.60
Thinner	DuPont 8210

Tables 1 & 2 show anticipated typical physical properties for DuPont 7112 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 7112 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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