

DuPont BQ321

PLATINUM CONDUCTIVE COMPOSITION

Technical Data Sheet

Product Description

DuPont BQ321 is a Pt 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

- 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 hour
- **Screen Type**
Polyester, stainless steel
- **Typical Cure Conditions**
Box Oven: 130°C for 5 - 10 minutes
Reel-to-reel: 140°C for 1 minutes
- **Typical Circuit Line Thickness Printed with 200-mesh stainless screen**
8 - 12 microns
- **Clean-up Solvent**
Ethylene diacetate or methyl propyl acetate

Table 1
Composition Properties

Test	Properties
Solids (150°C) (%)	44.0 - 46.5
Viscosity (Pa.S) [Brookfield RVT, spindle#14, 10rpm, 25°C]	5 - 10
Coverage (cm ² /g/mil) (sqft/gal/mil)	52 430
Density (g/cc)	2.02
Thinner	DuPont 3610

Table 2
Typical Physical Properties on 5-mil Polyester Film

Sheet Resistivity (Ω/sq/mil)	5 - 10
Adhesion (Treated PET 5 mil) (B)	5
Abrasion Resistance (H), Pencil Hardness [ASTM D3363-74]	4
Solder	Not Recommended

Table 1 & 2 show anticipated typical physical properties for DuPont BQ321 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

BQ Series compositions should be stored in a clean, stable environment at room temperature (~25°C) with their lids tightly sealed. Storage in high temperature (>30°C) or in freezers (<0°C) is NOT recommended as this could cause irreversible changes in the material. The shelf life of compositions in factory-sealed (unopened) containers stored under room temperature (~25°C) conditions is 6 months from the date of shipment. Some settling of solids may occur over time, so composition should be stirred thoroughly before use.

Safety and Handling

For Safety and Handling information pertaining to this product, read the Material Safety Data Sheet (MSDS).

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