

DuPont™ LuxPrint® 8150B

ELECTROLUMINESCENT MATERIAL

Technical Data Sheet

Product Description

DuPont™ LuxPrint® 8150B electroluminescent material is used in combination with DuPont EL Dielectrics and Conductors to fabricate electroluminescent lamps*. This composition is designed to provide a uniform layer of white phosphor in a polymeric matrix when screen printed. LuxPrint® 8150B utilizes microencapsulated phosphor powder and hydrophobic binders for excellent moisture protection. LuxPrint® 8150B has a slight pink color in the “off-state”. This composition is formulated with a unique phosphor powder making it up to 25% brighter than standard LuxPrint® 8150.

Product Benefits

- Encapsulated phosphor
- High light intensity
- Excellent moisture protection
- Ready for screen printing
- Compatible with Luxprint® System
- Excellent adhesion to Indium Tin Oxide (ITO) sputtered polyester

Processing

- **Screen Printing Equipment**
Semi-automatic or manual
- **Substrates**
Polyester, ITO-Polyester (80Ω/sq), glass
- **Ink Residence Time On Screen**
>2 hours
- **Screen Types**
Polyester: 77T-62T;
Stainless Steel: 200 mesh
20-25µm emulsion
- **Typical Cure Conditions**
Box oven: 130°C/10 min.
Belt dryer: 130°C/90 sec.
- **Layer Thickness**
25 - 40 µm (dry)
- **Clean-up Solvents**
Ethylene Diacetate, Acetone
- **Coverage**
110 – 130 cm²/g

Table 1
Composition Properties

Test	Properties
Viscosity (Pa.s) [Brookfield ½RVT #14 @ 10rpm, 25°C]	10 - 20
Solids (150°C)(%)	73 - 78
Thinner	DuPont 8210
Paste Color	Pink
Color in Powered lamp	White

Table 1 shows anticipated typical physical properties for LuxPrint® 8150B based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

Printing

This composition must be thoroughly mixed before use. This is best achieved by slow, gentle, hand stirring with a clean, preferably plastic spatula for several minutes. Care must be taken to avoid air entrapment.

Printing should be performed in a clean and well ventilated area. Note: optimum printing characteristics are generally achieved in the room temperature range of 20°C-23°C. It is therefore important that the material, in its container, is at this temperature prior to commencement of printing.

Thinner

This composition is optimized for printing, thinning is not normally required. Use the DuPont recommended thinner for slight adjustments to viscosity or to replace evaporation losses. The use of too much thinner or the use of a non recommended thinner may affect the rheological behavior of the material and its printing.

General

Yield and performance will depend to a large degree on the care exercised during processing, particularly in screen printing. Scrupulous care should be taken to keep the composition, printing screens and other tools free of metal contamination. Dust, lint and other particulate matter may also contribute to poor yields.

Compatibility

DuPont™ LuxPrint® 8150B electroluminescent material is compatible with other members of the DuPont™ Luxprint® System, and should be used together with the recommended conductors and dielectrics. While DuPont has tested this composition with the specified materials and under the recommended processing conditions, it is impossible or impractical to cover every combination of materials, customer processing conditions and circuit layouts. It is therefore essential that customers thoroughly evaluate the material in their specific situations to completely satisfy themselves with the overall quality and suitability of the composition for its intended application (s).

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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