

DuPont™ LuxPrint® 8154L

ELECTROLUMINESCENT MATERIAL

Technical Data Sheet

Product Description

DuPont™ LuxPrint® 8154L 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 yellow-green phosphor in a polymeric matrix when screen printed. Microencapsulated phosphor powder and hydrophobic binders are used for excellent moisture protection. The Long-Life composition utilizes a unique phosphor powder which provides superior brightness and longer lamp lifetime.

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

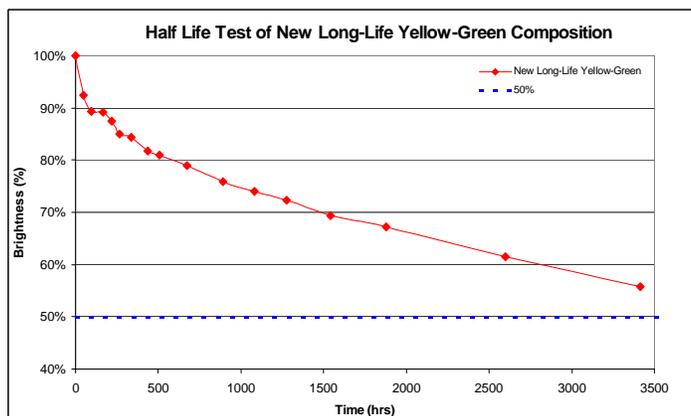
Processing

- **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 - 76
Thinner	DuPont 8210
Paste Color	Cream
Color in Powered lamp	Yellow-Green

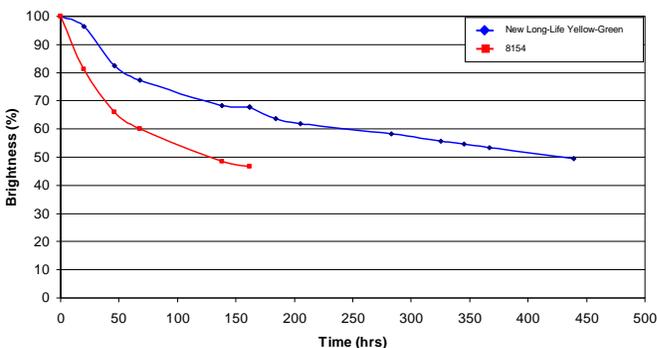
Table 1 shows anticipated typical physical properties for LuxPrint® 8154L based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.



Tested at 100V, 400Hz

* For further information, please see LuxPrint® Processing guide

Comparison of New Long-Life Yellow-Green vs. 8154
at 60C/90% RH



Tested at 100V, 400Hz

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.

Storage and Shelf Life

Containers may be stored in a clean, stable environment at room temperature (<25°C), with their lids tightly sealed. Storage in freezers (temperature <0°C) is NOT recommended as this could cause irreversible changes in the material. 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. Phosphor particles tend to settle out during static storage. Gentle jar rolling or turning the jars may be used to minimize settling of the phosphor component.

Safety and Handling

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



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