**Introduction**

These range of Electroluminescent (EL) Phosphor Inks are based on a unique curing process that results in the low temperature formation of a thermosetting polymer that combines good adhesion to Conductive ITO Films with excellent chemical, environmental and abrasion resistance. As a result, these inks can be used to make vibrant Electroluminescent Light Panels with good working life.

Nejilock Technology uses high quality encapsulated EL Phosphor and our proprietary organic binder to create a range of Electroluminescent Phosphor Printing Inks suitable for Silk Screen Printing applications.

NP001 was specially formulated for the production of High Bright and Long Life Blue/Green and Pink Off/White On (POWO) Electroluminescent Light Panel. It works best with our Conductive ITO Film, Dielectric Ink, Silver Paste and Inverters.

**Properties**

Encapsulated Electroluminescent Phosphor are protected by Patent and GTP is the current owner. Nejilock purchase these phosphors at pre-negotiated price so that we can give you the best values. Please be wary of supplier claiming to have encapsulated phosphor at cheap price. As phosphor ink is one of the major component in making an EL Light Panel, we would like to assure you that we supply you only the best materials with good physical and chemical properties. This is to ensure that you will be able to consistently produce good quality EL Light Panels.

- **Phosphor Brand**: GTP
- **Phosphor Type**: High Bright, Encapsulated
- **Phosphor Colour**: Aqua
- **Binder**: Nejilock NB003
Mixed Properties:

<table>
<thead>
<tr>
<th>Item</th>
<th>Results</th>
<th>Conditions</th>
<th>Electrical Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL Panel Colour</td>
<td>Blue</td>
<td>When use with Nejilock ND001 Dielectric White</td>
<td>110Vac +/- 10% 400Hz +/- 10%</td>
</tr>
<tr>
<td>EL Panel Colour</td>
<td>Green</td>
<td>When use with Nejilock ND001 Dielectric White</td>
<td>110Vac +/- 10% 200Hz +/- 10%</td>
</tr>
<tr>
<td>EL Panel Colour</td>
<td>Pink Off/White On</td>
<td>When use with Nejilock ND003 Dielectric Pink</td>
<td>110Vac +/- 10% 800Hz +/- 10%</td>
</tr>
<tr>
<td>Luminance</td>
<td>100cd/m²</td>
<td></td>
<td>110Vac +/- 10%</td>
</tr>
<tr>
<td>Solid Contents</td>
<td>55%-65%</td>
<td>150°C</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>0.86 – 2.50 Pa s</td>
<td>Haake VT550, PK1.1° at 230 sec⁻¹ at 25°C</td>
<td></td>
</tr>
<tr>
<td>Coverage</td>
<td>80cm² per gm</td>
<td>Using 100T mesh</td>
<td></td>
</tr>
</tbody>
</table>

Processing

The Phosphor Inks must be rolled for 4 - 6 hours prior to use (i.e. using a Rock ‘n’ Roll mixer or a Tumbler mixer) to ensure product is homogenous. Please do not stir the product with metal stirrer as it will damage the encapsulation, use only wooden spatter if stirring is necessary.

Screen Printing Equipment * Semi-Automatic or Manual
Ink Screen Life * >3 hours
Screen Types * 100T Polyester Mesh
Typical Curing Conditions * Belt Dryer 135°C for 4 - 5 minutes (Depending on Dryer design)
                          * Box Oven 135°C for 30 – 45 minutes (Depending on Dryer design)
Clean Up Solvent * Ethoxy Propanol or Sericol
Substrate * ITO coated polyester film (Suggest using Nejilock’s ITO/PET Film)
Storage * The product should be kept sealed, in its container, and stored at room temperature (20°C)
Shelf Life * In a sealed container, stored correctly, the shelf life is minimum 6 months from despatch.
Diluent / Thinner * Not Recommended

Safety and Handling

These inks are intended for industrial use by trained personnel. It is important for workers to avoid overexposure to chemicals contained in these products. Read the Material Safety Data Sheet (MSDS) and product labels before using the products. Keep product container closed when not in use to prevent solvent evaporation and spilling hazard.

The information given and the recommendations made herein are based on our research and are believed to be accurate but no guaranty of their accuracy is made. In every case, we urge and recommend that purchasers, before using any product in full scale production, make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purposes under their own operating conditions.