



## LED CURABLE INK SYSTEMS



Since 2005 Polymeric has been involved in the continued development of LED (Light Emitting Diodes) curable inks and coatings for use in practically all graphics printing markets. With a long history of innovation, Polymeric Imaging is well suited for the venture into LED. Polymeric refers to these LED formulations as Twilight LED. While these markets are vast, the development of Twilight LED curable inks continues to require some of the most innovative and advanced chemistry available to date. The economic and environmental advantages associated with LED technology are extensive, and today it represents a doorway in to what the future holds for all facets of printing globally.

Today Polymeric Imaging is able to offer Twilight LED technology in a myriad of standard and customized formulations for literally any printing venue. The formulations of such chemistry can be specifically designed for curing under exposure to LED light sources for practically any industry, from industrial to commercial applications.

### Performance Properties

- Excellent chemical resistance
- Superb water/moisture resistance
- Flexible for multi-layer applications
- Extremely fast cure speeds
- Elevated color strengths for backlit applications
- Clean, strong, vivid colors offer a spectacular color gamut.
- Superb post-print finishing

### Application & Curing / Processing Guidelines

Twilight LED has excellent curing speeds. The Twilight LED ink system will not distort or waffle flexible media once cured. Twilight LED has been specifically engineered to replace existing UV based ink systems. Once cured, Twilight LED exhibits a very flexible vibrant & scratch resistant finish.

The Twilight LED ink system has been developed to provide outstanding adhesion to a wide range of substrates typically utilized in POP, Packaging, label, Flexo, Digital, screen and container printing.

Also available in this unique chemistry is Polymeric's specialty coatings, such as high performance clear and pigmented coatings for Flexo, anilox and roller coating applications.

Twilight LED will cure at belt speeds of 50 – 100 feet per minute using the correct configuration of LED sources between 365 – 395 nm.

Colors available include standard opaque line colors, CMS colors and halftone colors for process printing.

### Benefits of LED Curing:

- Reduced energy consumption
- Eco friendly
- No warm up time
- LED lasts 10 times longer than mercury vapor lamps
- No effect on heat sensitive substrates
- No ozone emissions

### A. Warranty Liability Limited to Purchase and Installation Costs

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### Recommended Substrates

- Polystyrene
- PETG
- Polycarbonate
- High Impact Polystyrene (HIPS)
- PVC
- Acrylic
- Vinyl Banner
- Coroplast
- Pressure Sensitive Vinyl
- HDPE\*
- Coated Cardstocks

\*\*Treatment is necessary

### Storage Lightfastness

Twilight LED uses only the highest grade of pigments available today. Twilight LED's exterior durability is largely dependent on the amount of ink deposited, which is directly related to the print method. When used at 100% strength, Twilight LED's estimated exterior durability is up to three years. A Twilight LED high performance clear is available for applications where extended durability is required. Please call for additional information.

Care should be taken to store ink in tightly closed containers located in a cool (60 - 80°F / 15 - 27°C) dark place. With suitable conditions, unopened ink is expected to have a shelf life of approximately twelve (12) months from date of manufacture.

### Precautions

Read the material safety data sheet prior to processing. It contains instructions for precautions to be taken when handling inks. If ink comes in contact with skin, wipe ink off with a clean, dry cloth (do not use solvent). Wash and rinse the affected area with soap and water.