

Product Information

The NXG Ink Series has been specifically formulated to adhere to a wide range of print treated substrates while still offering flexibility, water resistance and good light-fastness properties. The advanced formula of the NXG series has been engineered to withstand changes in viscosity on all multi-color in-line press machinery. End uses include indoor and outdoor point of purchase displays, decals, banners and transit signage.

NXG Features

- Advanced Color Gamut™ Four-Color Process Colors
- Fast Cure Speeds at Low UV Light Dosages
- An Extremely Diverse Adhesion Range
- Good Durability and Water Resistance
- Low Pile Height Rheology
- Up to 2 Year Light-Fastness*
- Automotive Grade Pigments

Substrate Application

- Treated Polyethylene Banner Materials
- Treated Coroplast™ / Fluted Polyolefin
- High Density Polyethylene (HDPE)
- Reinforced Vinyl Banner Materials
- Coated Paper and Board Stocks
- Pressure Sensitive Vinyl
- Polystyrene (Styrene)
- Static Cling Vinyl
- Polycarbonate
- Card Stock



■ **Product Description**

The NXG Ink Series is a flexible, one component, high-gloss, ultra-violet curing, premium ink system which adheres to a wide variety of substrates. End uses include indoor and outdoor point of purchase displays, decals, banners and transit signage.

■ **Screen Mesh**

355 to 420 (140 to 165 cm) monofilament polyester is recommended.

■ **Stencils**

Direct emulsions and capillary films which are both solvent resistant, UV compatible and yield a thin deposit of 3 to 7 microns of emulsion over mesh (EOM).

■ **Squeegee Type**

A sharp 70 to 85 single or multi-durometer polyurethane blade.

■ **Ink Yield and Coverage**

Colors should achieve a yield of 3100 to 3,950 square feet per gallon (73 to 93 square meters per liter) depending upon ink deposit. To ensure optimum ink flexibility, ink economy and UV curing performance a thin ink deposit of .40 to .80 mil (10 to 20 microns) is highly recommended.

■ **Curing Parameters**

The NXG Ink Series is formulated to cure when exposed to a focused medium pressure mercury vapor UV lamp in a spectral range of 250 and 360 nanometers to initiate cure. NXG will normally cure sufficiently in a single UV lamp unit set at 200 watts per inch (80 watts per cm) at a belt speed of 50 to 75 feet (15 to 22 meters) per minute.

■ **Adhesion Testing**

It is imperative that all substrates are tested prior to use within production. Even similar materials can vary between different batches, manufacturers or the age and storage time of the particular substrate. Certain types of flexible substrates (IE: reinforced vinyl) may be manufactured with plasticizers which can impair ink adhesion and print performance. NXG has been specifically formulated to adhere to most polyethylene substrates with a surface tension levels of 42 to 46 dyne/cm or higher. Conclusive testing regarding the inks final adhesion properties should be completed 24 hours after the initial curing. Once the proper UV energy is achieved, the adhesion should be inspected after the print has cooled down by:

- Observing that the ink is very smooth with a high gloss.

- Cross Hatch Test—Using a sharp blade or cross hatch knife, cut through the film of the ink only, then Apply 3M #600 tape firmly on the cut area. Rub the tape down firmly then rip off. Ink should only come off in the straight cut areas.

Cure speed and adhesion performance are dependent on the ink opacity, film thickness, color and the overall condition of the curing unit. UV ink under-curing is usually due to excessive ink deposit and/or a poorly maintained UV curing unit.

■ **Ink Additives and Thinning**

Stir the ink well before every use. The NXG Ink Series is supplied in a press ready condition for most applications and printing equipment. When the ink is cold or the viscosity of the ink is thicker than desired, it is best to mix the ink thoroughly with a high speed mixer until the ink returns to the proper room temperature and viscosity. If reduction in ink viscosity is required, 3901 thinner may be used sparingly by no more than 2 to 5% by weight.

3104 Flattening Paste can be used to change the gloss level of the ink to a satin or flat finish. Only 5 to 10% of Flattening Paste needs to be added by weight to change the ink's gloss level. Please be aware that the addition of the 3104 Flattening Paste increases the viscosity of the ink.

Use 3 to 5% of 3105 Adhesion Promoter / Catalyst by weight to improve chemical resistance and adhesion. Please note however, that the addition of the 3105 Adhesion Promoter / Catalyst will result in a reduced pot life of 4 to 6 hours under most conditions. We strongly recommend mixing only enough ink for an estimated 4 hour period.

■ **Color Availability**

The NXG Ink Series includes the Single Pigment Mixing Colors, Standard Colors and the Advanced Color Gamut™ four-color process inks.

Single Pigment Mixing Colors

- NXG-01 Green Shade Yellow
- NXG-02 Red Shade Yellow
- NXG-03 Yellow Shade Red
- NXG-04 Blue Shade Red
- NXG-05 Magenta
- NXG-06 Maroon
- NXG-07 Violet
- NXG-08 Red Shade Blue
- NXG-09 Green Shade Blue
- NXG-10 Blue Shade Green
- NXG-11 Yellow Shade Green

Additives / Thinners

- 3901 UV Thinner
- 3104 Flattening Paste
- 3105 Adhesion Promoter / Catalyst

Fire Red is also a single pigment color.

** 1 year out door light fastness.

Standard Colors

- NXG-12 Lemon Yellow
- NXG-13 Medium Yellow
- NXG-14 Fire Red*
- NXG-15 Rubine
- NXG-16 Warm Red
- NXG-17 Emerald Green
- NXG-18 Process Blue
- NXG-19 Reflex Blue**
- NXG-20 Ultra Blue**
- NXG-21 Opaque White
- NXG-22 Tinting White
- NXG-25 Opaque Black
- NXG-26 Shading Black
- NXG-30 Mixing Clear
- NXG-31 Over Print Clear
- NXG-32 Metallic Clear

Advanced Color Gamut™ Halftone Colors

- NXG-40 Halftone Yellow
- NXG-41 Halftone Magenta
- NXG-42 Halftone Cyan
- NXG-43 Halftone Black
- NXG-44 Halftone Extender Base
- NXG-45 Halftone High Density Halftone Yellow
- NXG-46 Halftone High Density Halftone Magenta
- NXG-47 Halftone High Density Halftone Cyan
- NXG-48 Halftone High Density Halftone Black

■ **Advanced Color Gamut™ Halftone Colors**

■ Ink Wash Up

Wash up on press with a UV ink press wash and reclaim with degradents specifically developed for UV inks.

■ Storage

Store at room temperature, below 100° F (38° C). Always avoid open flames and excessive heat exposure. Protect from freezing and open light sources.

■ Packaging

Available in gallons and five-gallon pails. 50 gallon drums can be ordered.

■ Safety and Handling

Refer to the Material Safety Data Sheet for this product prior to use.

■ Estimated Durability and Light-fastness

Although outdoor durability cannot be specified exactly, accelerated weathering tests indicate that the NXG Series Ink Line has an exterior life up to two years on most substrates, with exception to Reflex and Ultra Blue. Reflex and Ultra Blue has an exterior life up to one year. Variables within production and the end products use within the field will greatly affect a printed substrates durability. A slight change in color and gloss level should be expected.

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