

# 11000 Series

*multi-plastic solvent-based Ink*

Technical  
Data Sheet

solvent-based inks

## ***Product Information***

The 11000 Ink Series has been specifically formulated to adhere to a wide range of substrates while still offering substrate flexibility and water resistance. End uses include fabric banners, city pole banners, metal signs, awning and point of purchase displays.

## ***11000 Series Features***

- An Extremely Diverse Adhesion Range
- Flat Non-Reflective Gloss Level for Outdoor Applications
- Excellent Durability and Water Resistance
- Up to 2 Year Light-Fastness\*
- Plastics Migration Resistant
- Automotive Grade Pigments

## ***Substrate Application***

- Treated Polyethylene
- Treated Polypropylene
- Coated Wood
- Coated Metal
- Nylon Fabric
- Leather
- Tyvek®
- PVC



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The end-user must always determine the suitability of this product for the intended use prior to production. Please allow at least 24 hours after printing to evaluate the suitability of the ink and its adhesion to the surface. Revision 3.1 - 12/05/2004

\* Please read the section on ink light-fastness, "Estimated Durability and Light-fastness".

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## Application Instructions

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### ■ Product Description

The 11000 Ink Series is a flexible, one component, no gloss, chemical resistant solvent-based ink system which adheres to a wide variety of substrates. The 11000 Ink Series can be used to print nylon jackets, flags, Tyvek<sup>®</sup>, plastic sheeting, leather, wood, metals and treated polyethylene and polypropylene plastic containers.

### ■ Screen Mesh

110 to 305 (43 to 120 cm) monofilament polyester is recommended.

### ■ Stencils

Solvent proof or water-soluble emulsion only. Use a water-soluble blockout.

### ■ Squeegee Type

A sharp 65 to 75 single durometer blade.

### ■ Ink Additives and Thinning

Stir the ink well before every use. The 11000 Ink Series is supplied in a press ready condition for most applications and printing equipment, however certain additives may be required for different types of printing applications. Use TW-11017 Thinner for normal viscosity adjustments or to improve the inks flow by no more than 5 to 10% by weight. Retard with TW-1091 for fine detail printing, slow print cycles or high temperature conditions by no more than 5 to 10% by weight. For maximum adhesion to synthetic fabrics, inks must be thinned for better surface penetration. An over reduction with retarders and thinners can result in blocking and a significant reduction in drying speed. Never exceed recommended levels of reduction.

Use 2 to 5% of TW-2919 Adhesion Promoter / Catalyst by weight to improve chemical resistance and adhesion. Please note however, that the addition of the TW-2919 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 to 6 hour period.

### ■ Ink Yield and Coverage

Colors should achieve a yield of 1,400 to 2,000 square feet per gallon (33 to 47 square meters per liter) depending on fabric selection, squeegee hardness, substrate absorption and press mechanics.

### ■ Drying Parameters

The 11000 Series will air dry in 10 to 20 minutes at normal room temperature. Force drying in seconds at 90° to 150° F (32° to 66° C). To prevent the blocking of material after printing, it is paramount to ensure that the temperature of the drying is not excessive and the air flow surrounding the material is good. Material blocking may occur if sheets are stacked when warm.

### ■ 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 fabrics may be manufactured with surface treatments which can impair ink adhesion and print performance. The 11000 Series has been specifically formulated to adhere to most polyethylene and polypropylene substrates with surface tension levels of 38 dyne/cm or higher. Once the ink has been fully dried and allowed to cool down, the adhesion should be tested by:

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.

## Color Availability

### ■ Color Availability

The 11000 Ink Series includes the Single Pigment Mixing Colors, Standard Colors and the Advanced Color Gamut™ four-color process inks.

#### Single Pigment Mixing Colors

11001 Green Shade Yellow  
11002 Red Shade Yellow  
11003 Yellow Shade Red  
11004 Blue Shade Red  
11005 Magenta  
11006 Maroon  
11007 Violet  
11008 Red Shade Blue  
11009 Green Shade Blue  
11010 Blue Shade Green  
11011 Yellow Shade Green

#### Additives / Thinners

TW-11017 Thinner  
TW-1091 Retarder  
TW-2919 Adhesion Promoter /  
Catalyst

\* Fire Red is also a single pigment color.

\*\* 1 year out door light fastness

#### Standard Colors

11012 Lemon Yellow  
11013 Medium Yellow  
11014 Fire Red\*  
11015 Rubine  
11016 Warm Red  
11017 Emerald Green  
11018 Process Blue  
11019 Reflex Blue\*\*  
11020 Ultra Blue\*\*  
11021 Opaque White  
11025 Opaque Black  
11030 Mixing Clear / Overprint Clear

#### Advanced Color Gamut™ Halftone Colors

11040 Halftone Yellow  
11041 Halftone Magenta  
11042 Halftone Cyan  
11043 Halftone Black  
11044 Halftone Extender Base

### ■ Ink Wash Up

Wash up on press with a press wash and reclaim with degradents specifically developed for solvent-based inks. Do not use Mineral Spirits, Lacquer Thinner or other solvents used within other screen printing inks. The 11000 Series unique formula requires additives developed exclusively for this product line.

### ■ Storage

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

### ■ Packaging

Available in quarts, gallons, & five-gallon pails.

### ■ 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 11000 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. Some chalking might occur with specific pigments on exterior exposure.

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