

# UVANTAGE

UV Ink for Multiple P.O.P. Substrates

## Features

- ▶ Wide Adhesion Range
- ▶ Fast Cure Speed
- ▶ Extreme Water Resistance
- ▶ Ideal for In-Line Presses
- ▶ Superior Flexibility
- ▶ Low Viscosity Rheology

## Substrate Application

Polyethylene Banner Materials

Polystyrene

Coated Paper and Board Stocks

Most Vinyl Banner Materials

Most Static Cling Vinyls

Pressure Sensitive Vinyls

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### Thinning

Stir well before every use. UVantage inks are supplied in a press ready condition for most printing applications. For certain printing conditions it may be necessary to thin slightly (3-5% with POP-TH Thinner).

### Mesh

UVantage prints and cures well through 355-380 (150 to 160/cm) plain weave monofilament polyester. For optimum flexibility, every endeavor should be made to minimize ink film thickness.

### Stencils

Stencil materials must be solvent resistant and produce a thin film stencil (3-6 microns over mesh). Dirasol SuperCoat 917 emulsion is recommended to give the highest print quality, minimize deposit variables, and improve economy.

### Curing

Ultraviolet curable inks are dependent on a high dosage of intense ultraviolet light in a spectral range between 250 and 360 nanometers to initiate cure. Light energy must penetrate the entire ink layer to achieve proper cure and ink performance.

In a curing unit containing one 200-watt/inch (80 watt/cm) lamps, UVantage inks will normally cure at approximately 50-70 feet (15-18 m) per minute. Cure speeds are dependent on colors, film thickness, opacity, and condition of the curing unit. For best results, ink should be cured immediately after printing.

If under-cure is experienced with any color, demonstrated through a wet film or loss of gloss, it is usually due to excessive ink deposit. To correct this, the mechanics, such as mesh, squeegee, color density, belt speed, or the amount of UV energy, must be changed.

Reduction of color density is easily achieved by letting the color down with MX (Mixing Clear) until proper cure is obtained.

Adhesion should be at least 80% immediately out of the reactor with final adhesion developing in two to four hours. If total cure on a given substrate with a specific color needs to be established, the piece should be passed through the reactor one or two more times. This will usually simulate final adhesion.

### Coverage

Standard line colors should yield a coverage of 3000-3800 square feet/gallon (73-93m<sup>2</sup>/liter) provided the ink deposit is between .50 and .70 mil. thick (12 and 18 microns).

### Wash Up

Wash up on press with Xtend™ press washes and after the production run with Xtend™ ink degradents.

### Pre-Production Test

UVantage has been formulated to adhere to most treated polyethylene banner substrates with surface tension levels of 42-46 dyne/cm or higher. However, it is strongly recommended that all substrates be tested before use as supposedly similar substrates can vary between different manufactures and even between different batches from the same manufacturers. Certain other plastics may be impregnated with lubricants which, like plasticizer migration, may impair adhesion and block resistance even a considerable period after printing. Other plastics can become brittle or caused to curl after printing.

**END-USER MUST DETERMINE SUITABILITY OF THIS PRODUCT FOR THE INTENDED USE PRIOR TO PRODUCTION.**

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## Post Print Recommendations

Success of post printing processes such as hemming, sewing, and/or grommeting is very ink film thickness related. Thin ink films (10 to 15 micron) are more flexible and will, therefore, be more successful in these finishing processes.

**ALWAYS PRE-TEST FINISHING PROCESS(ES) PRIOR TO PRODUCTION.**

## Outdoor Use

Accelerated weathering tests indicate UVantage has an exterior life of up to one year on most materials. Substrate life will vary and may cause premature product degradation.

## Color Availability

The UVantage standard color range includes the nine base Seritone Matching System (SMS) colors, standard colors, and halftone colors.

## The Seritone Matching System

The Seritone Matching System has been designed to enable printers to readily simulate PANTONE®\* and most other colors in-house. The system consists of nine SMS base colors, each of which has been selected for its cleanliness of tone and suitability for intermixing. Using the SMS base colors plus Shading Black and Mixing Clear, almost any color can be produced.

## Standard Halftone Colors

UVantage standard halftone colors are matched to "SWOP" standards (Specification Web Offset Publication). The densities are slightly higher than SWOP under most conditions and, therefore, offer scope for adjustment with the addition of halftone extender base (POP-HTX).

## Standard Colors

POP-111	Lemon Yellow
POP-123	Medium Yellow

POP-141	Fire Red
POP-155	Rubine Red
POP-180	Warm Red
POP-190	Process Blue
POP-205	Reflex Blue
POP-210	Ultra Blue
POP-221	Emerald Green
POP-301	Opaque Black
POP-311	Opaque White

## Seritone Matching System Colors

POP-064	SMS Yellow GS (Green Shade)
POP-066	SMS Yellow RS (Red Shade)
POP-114	SMS Orange
POP-121	SMS Red YS (Yellow Shade)
POP-164	SMS Red BS (Blue Shade)
POP-165	SMS Magenta
POP-127	SMS Violet
POP-230	SMS Blue
POP-325	SMS Green
POP-SB	SMS Shading Black
POP-MX	Mixing Clear

## Halftone Colors

POP-HTY	Halftone Yellow
POP-HTR	Halftone Red
POP-HTB	Halftone Blue
POP-HTK	Halftone Black
POP-HTX	Halftone Extender Base
POP-IHY	Intense Halftone Yellow
POP-IHR	Intense Halftone Red
POP-IHB	Intense Halftone Blue
POP-IHK	Intense Halftone Black

## Thinners/Retarders

POP-TH	Thinner
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\*Pantone, Inc's check-standard trademark for reproduction and color reproduction.

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## UV Ink for Multiple P.O.P. Substrates

### Intense Halftone Colors

UVantage intense halftone colors are considerably higher in density than "SWOP" standards. POP-HTX can be used to adjust color density.

### Special Matches

Special colors can be supplied against prints, wet ink, PANTONE® numbers, or other Sericol standard colors.

### Metallic Powders

Metallic powders may be mixed with UVantage Mixing Clear (POP-MX). The recommended mixing ratios are 8% by weight of silver powder and 20% of gold powder. Due to the possibility of chemical changes after mixing, it is highly recommended that metallic shades be mixed daily.

### Reducers/Modifiers

UVantage colors are supplied at a press ready viscosity for most printing applications. It may be necessary to thin slightly (3%-5%) with POP-TH

for special applications UVantage Mixing Clear (POP-MX) may be used to reduce the strength of a color with minimal effect of viscosity

### Storage

Containers should be tightly closed immediately after use. At the end of long printing runs, surplus ink from the screen should be disposed of. UVantage inks and reducers should not be stored in direct sunlight or extreme temperatures. Refer to Material Safety Data Sheet (MSDS) for materials and conditions to be avoided.

In the interest of maximum shelf life, storage temperatures should be between 50°F (10°C) and 77°F (25°C). When stored under these conditions the maximum shelf life is shown by the use by dates, which are clearly marked on all ink containers.

### Safety and Handling

Refer to MSDS for safety, handling, and waste disposal information.

The information and recommendations contained in this Technical Data Sheet, as well as technical advice otherwise given by representatives of our Company, whether verbally or in writing, are based on our present knowledge and believed to be accurate. However, no guarantee regarding their accuracy is given as we cannot cover or anticipate every possible application of our products and because manufacturing methods, printing stocks and other materials vary. For the same reason, our products are sold without warranty and on condition that users shall make their own tests to satisfy themselves that they will meet fully their particular requirements. Our policy of continuous product improvement might make some of the information contained in this Technical Data Sheet out of date and users are requested to ensure that they follow current recommendations.

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