

## 5000 Series

### PRODUCT INFORMATION

The 5000 Ink Series has been specifically formulated to adhere to a wide range of substrates offering rich, gloss colors.

### APPLICATION FIELD

End uses include fine art serigraphs, nameplates, skate boards, posters, aircraft interiors, and point of purchase displays.

### APPLICATION PROCESS

<b>Substrates</b>	Treated Coroplast™ / Fluted Polyolefin*, Pressure Sensitive Vinyl, Treated Polyethylene, Polystyrene (Styrene), Treated Polyester (Substrate not Fabric), Polycarbonate, Coated Wood, Card Stock, Tyvek®, Tedlar®, PVC, ABS
<b>Th/cm</b>	From 200 to 380 (80 to 150 cm), monofilament polyester is recommended.
<b>Emulsion</b>	Solvent and water-proof emulsion only. Dual cure emulsions are recommended for added durability. Emulsion stencil must be thoroughly dried before image exposure. Use a water-proof block-out or emulsion for small touch-up areas.
<b>Squeegee</b>	Sharp 70 to 85 single or multi-durometer polyurethane blade
<b>Ink Yield and Coverage</b>	Colors should achieve a yield of 1,400 to 2,000 square feet per gallon (33 to 47 square meters per liter) depending upon on substrate selection, squeegee hardness, substrate absorption and press mechanics.

<b>Drying</b>	The 5000 Series will air dry in 20 to 30 minutes at normal room temperature. Force drying in seconds at 150° F (66° C). Material blocking may occur if sheets are stacked when still hot. Good air flow is important.
<b>Cleaning</b>	Wash up on press with a press wash and reclaim with degreants specifically developed for water based inks.
<b>Storage</b>	Store at room temperature, below 100° F (38° C). Always avoid open flames and excessive heat exposure. Protect from freezing.
<b>Packaging</b>	Available in quarts, gallons and five-gallon pails. 30 and 50 gallon drums can be ordered.
<b>SDS</b>	Available upon request

### GENERAL FEATURES

- An extremely diverse adhesion range
- Brilliant colors with a gloss finish
- Easy clean up
- Up to 5 years light-fastness\*
- Automotive grade pigments

### ADDITIVES AND THINNERS

Stir the ink well before every use. The 5000 Ink Series is supplied in a press ready condition for most Applications and printing equipment. Use TW-1820 or water for normal press viscosity reduction by no more than 5 to 10% by weight. Retarders should be used sparingly to reduce the inks drying time within the screen. Use TW-1823 slow retarder for fine detail printing, slow print cycles or high temperature conditions. Use no more than 5 to 10% of thinner or retarder by weight. 5100 Defoamer can be used by 1 to 2% by weight to eliminate the "bubbling" or foaming effect of the ink when printing at high press speeds. An over reduction with retarders, and thinners can result in blocking and a significant


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reduction in drying speed. Never exceed recommended levels of reduction.

Use 2 to 3% of WB Activator by weight to improve chemical resistance. Please note however, that the WB Activator will stay active within the ink for only a 24 hour period under most conditions. The ink can be reactivated one additional time after the first 24 hour is complete by re-adding the Activator. We strongly recommend mixing only enough ink with the WB Activator estimated for a 24 hour period. 4108 Flattening Powder can be used to change the gloss level of the ink to a satin or flat finish. Only 1 to 8% of Flattening Powder needs to be added by weight to change the ink's gloss level. Please be aware that the addition of the 4108 Flattening Powder increases the viscosity of the ink. Reduce with the appropriate amount of water or thinner as necessary.

5009 Liquid Thickener can be used to increase the inks viscosity. This is normally added when printing fine detail or halftone areas. Only 1/2 to 1% of Thickener needs to be added by weight to increase the inks viscosity. After adding the Thickener to the ink, mix very well and allow the viscosity to fully develop for 10 minutes before use within production.

#### 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. 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.

#### PRODUCT RANGE

The 5000 Ink Series includes the Single Pigment Mixing Colors, Standard Colors and the Advanced Color Gamut™ four-color process inks.



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### Additives / thinners

Code	
TW-1823	SLOW RETARDER
TW-1822	THINNER
TW-1820	FAST DRY THINNER
	WB ACTIVATOR
5100	DEF OAMER
4108	FLATTENING POWDER
5009	LIQUID THICKENER

### COLOR CONCENTRATES

These highly pigmented Color Concentrates are compatible with all of the TW Graphic's water-based ink lines. The concentrates are offered to advanced color formulators who wish to have the flexibility to create an endless range of colors. Please read the section directly below on how to use the Color Concentrates appropriately within our water-based ink systems.

WB-01 Green Shade Yellow  
 WB-02 Red Shade Yellow  
 WB-03 Yellow Shade Red  
 WB-04 Blue Shade Red  
 WB-05 Magenta  
 WB-06 Maroon  
 WB-07 Violet  
 WB-08 Red Shade Blue  
 WB-09 Green Shade Blue  
 WB-10 Blue Shade Green  
 WB-11 Yellow Shade Green  
 WB-40 Halftone Yellow  
 WB-41 Halftone Magenta  
 WB-42 Halftone Cyan  
 WB-43 Halftone Black  
 WB-25 Black  
 WB-21 White  
 Fluorescent (9)

### CONCENTRATE MIXING INSTRUCTIONS

The WB Series Color Concentrates may be added to any of the TW Graphics 1000, 4000, 5000 and 5500 water-based ink series. Please take note however that these concentrates are not press ready inks and must be used proportionately with a Clear Base or white to maintain the inks printing integrity.

Do not use more than 30% Color Concentrate by weight to the Clear Base. Color Concentrate should be added slowly into the vortex of the base mix on a power mixer. Make certain that the ink is mixed thoroughly.

### \*DURABILITY AND LIGHT-FASTNESS

Although outdoor durability cannot be specified exactly; accelerated weathering tests indicate that the 5000 Series Ink Line has an exterior life up to five years on most substrates, with exception to Reflex and Ultra Blue. Reflex and Ultra Blue has an exterior life up to two years. 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.

### IMPORTANT NOTE

The information given in this technical sheet is not intended to be exhaustive and any person, using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us to the suitability of the product for the intended purpose, does so at his own risk.

While we endeavour to ensure that all advice we give about the product is correct we have no control over either the quality or condition of the substrate or the many factors affecting the use and application of the product.

Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage arising out of the use of the product.

The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development.


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