

Suggested Uses:

UVB Series is a UV curable ink system specially formulated for the vinyl banner market requiring a high degree of flexibility for sewing. The UVB Series has been formulated with a high performance resin system that provides excellent flexibility and block resistance for 2-sided printing. This system has also been formulated with a high cross-linking density, which allows potential plasticizers to be sealed into the vinyl fabric, and not migrate through the ink film. UVB Series inks have been developed with the use of high-grade pigments, producing excellent opacity and a light fast ink film.

Product Features

- Block Resistant Ink Film
- Excellent Exterior Exposure
- Excellent Opacity
- Fast Cure Speeds for In-line Printing
- Superior Flexibility for Sewing

Recommended Substrates:

1 & 2 sided vinyl banner fabrics, pressure sensitive vinyl, rigid and flexible vinyl, (*Note pg. 4) some coated metals and print treated polyester materials used in the decal market. Full testing by the end user is recommended to determine suitability of product for a specific substrate and application.

Mesh:

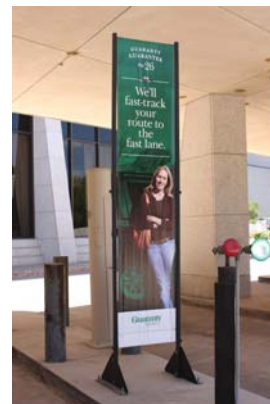
Mesh counts of 355 threads per inch or higher are recommended for opaque colors where a single (1) lamp system is used. Mesh counts of 305 threads per inch or higher are recommended for opaque colors, where two (2) lamp systems are used. Mesh counts should be selected based upon the end user's ability to cure the ink deposit.

Stencil:

Direct or capillary emulsions that are UV compatible, with a dry micron thicknesses between 7—10 μ is recommended. Thicker stencils can be used based upon the ability to cure the increased ink deposit.

Squeegee:

Sharp 70-90 durometer polyurethane blade or multi-durometer blades can be used. For optimal ink lay down, a sharp 80 durometer blade is recommended.



Coverage:

2,800 to 3,000 square feet per gallon based on film deposit of .40-to .60-mil thickness.

Thinner:

Mix well prior to every use. Although the UVB Series has been supplied in press ready condition for most applications, this system may be reduced up to 10% with UVO Universal Thinner.

Clean Up:

Use NSW-824 Screen Wash, or other UV compatible screen washes.

Precautions:

Gloves and / or barrier cream is recommended when handling UV inks. Safety glasses are suggested, particularly for areas where ink may be splashed. If skin contact occurs, wash affected area with soap and water (do not use solvent or thinners).

Cure & Adhesion:

A minimum of 125 mJ/cm² and .300 watts per inch is required for complete cure. Adhesion should be at a minimum of 95% from curing unit, with full adhesion within one hour of initial cure. When using coarser screen meshes, cure conditions may need to be adjusted for the increased ink deposit. If a loss of gloss and / or adhesion due to insufficient cure is noticed, the use of 5—10% UVB Series Mixing Clear will increase light penetration and improve cure.

Outdoor Use:

Extensive QUV accelerated weathering tests have been conducted on banners printed with the UVB Series. The UVB Series withstood 1,000 hours of exposure in a QUV chamber, with 4 hour cycle times of UV light and condensation, with minimal color changes and no shrinkage. Based on prior correlations of accelerated testing versus real time Florida exposure, 500 hours is equal to approximately one year, 45° south Florida. The use of premium grade, long-term vinyl films is recommended for all applications intended to weather more than two years. Refer to the product warranty guide for complete warranty specifications.

Accelerated machine weathering are reference standards and can not precisely reproduce actual outdoor performance.

Pre Masking:

The UVB Series is suitable for pre-masking. The use of a medium to high tack adhesive is recommended for good adhesion to the ink film.

Metallics:

The UVB-8011 Metallic Mixing Clear is supplied to use for mixing metallic powders and pastes, such as silver and gold. The increased viscosity of the Metallic Mixing Clear helps to ensure a good powder suspension. Recommended mixing ratios are: 8% by weight of Silver, 20% by weight of Gold.

Packaging:

Available in one (1) gallon and five (5) gallon containers. Smaller or larger quantities are available upon request.

Color Range:

Specific colors can be matched at Norcote® against prints, wet ink or PANTONE® numbers.

Standard Colors:

UVB 8123	Medium Yellow
UVB 8131	Brilliant Orange
UVB 8151	Scarlet Red
UVB 8155	Rubine Red
UVB 8160	Rhodamine Red
UVB 8190	Process Blue
UVB 8200	Peacock Blue
UVB 8205	Reflex Blue
UVB 8210	Ultra Blue
UVB 8220	Emerald Green
UVB 8415	HT Weatherable Yellow
UVB 8485	Warm Red



Color Matching Guide:

UVB 8101	Primrose Yellow
UVB 8111	Lemon Yellow
UVB 8064	CMG Yellow (GS)
UVB 8066	CMG Yellow (RS)
UVB 8114	CMG Orange
UVB 8121	CMG Red (YS)

Whites, Blacks and Clears:

UVB 8010	Mixing Clear*
UVB 8011	Metallic Mixing Clear
UVB 8012	Overprint Clear
UVB 8015	Satin Overprint Clear
UVB 8026	Barrier White
UVB 8030	Shading Black
UVB 8031	Tinting White*
UVB 8301	Opaque Black*
UVB 8305	Jet Black
UVB 8311	Opaque White
UVB 8312	Dense Black

* Used in Norcote's Color Matching guide

Process Colors:

The UVB four-color process colors exceed "SWOP" standards. Variation in densities may be achieved with the use of UVB 8450 Halftone Base. For the best results, use a plain weave mesh and a smooth, thin stencil coating.

Product Identification	Density
UVB 8410 HT Yellow	1.10
UVB 8420 HT Magenta	1.75
UVB 8430 HT Cyan	1.80
UVB 8440 HT Black	2.00
UVB 8450 HT Base	N/A

Product Identification	Density
UVB 8510 HD HT Yellow	1.20
UVB 8520 HD HT Magenta	2.20
UVB 8530 HD HT Cyan	2.10
UVB 8540 HD HT Black	2.10

Process Colors:

Product Identification	Density
UVB 8710 Ultra Dot HT Yellow	.80
UVB 8720 Ultra Dot HT Magenta	1.35
UVB 8730 Ultra Dot HT Cyan	1.25
UVB 8740 Ultra Dot HT Black	2.00

Fluorescent Colors:

Fluorescent colors are available upon request. Fluorescent pigments are not light fast beyond 60-90 days even with the use of an overprint clear. For maximum brightness and color stability, 230-260 mesh count is recommended.

Chartreuse
Orange/Yellow
Orange
Orange/Red
Rocket Red
Pink
Green
Blue

Metallics:

Introducing metallic materials into an ink will reduce the shelf life of the ink. Actual shelf life is dependent upon individual users conditions. As a general rule, it is recommended that only enough metallic ink is mixed for one days use (approximately 8 hours). Paste should be stored between 65° F-95° F to avoid solidification. If this occurs, reliquify the product by placing in an area with temperatures of 25° C-35° C.

040 Gold Paste
042 Silver Paste
044 Red Gold Paste
046 Copper Paste
240 Rich Gold Ink
242 Silver Ink



Storage & Available Warranties

All UV UVB Series inks should be stored in tightly closed, black polyethylene containers in an area with the temperature not to exceed 90° F (32.2° C). Avoid direct sunlight and indirect white light. Excess ink from print runs should be stored in separate containers to avoid contamination and is not covered under any warranty. When stored under these conditions, Norcote warrants the Products shall be free from defects in material and manufacture for a period of one (1) year from the date of sale for the UVB Series standard inks, with no additives, and for a period of one (1) month from the date of sale for any custom color containing Day Glo® JZB or T-Powder. **Norcote will not warrant any custom colors containing metallic pastes or any inks intermixed with competitor products.** Any warranties provided will be limited to the price paid for the actual products used which give rise to the warranty claim.

This Technical Bulletin is intended to be used for informational purposes only, and is in no way intended to create any warranties or other obligations on behalf of Norcote. All warranties, terms and/or conditions for a particular product will be specified on the applicable invoice and are only valid upon the creation of a legally-binding contract.

Testing

Due to the inability of Norcote to anticipate or control the conditions under which the Products and information relating thereto will be used and/or stored, Norcote cannot guarantee the results obtained from using the Products. Any Suggested Uses are merely representative, and because the final product will depend on a number of specific factors, the end user should pretest all substrates with the Products prior to use in production.

*PVC Plastics:

Decoration can aggravate embrittlement properties of PVC plastics which can lead to cracking and failure of the plastic. It is strongly recommended that the end user contact the polymer manufacturer to obtain information on the suitability for decorating with a UV ink as well as recommendations for molding / processing to reduce this potential. As every situation can not be tested for in a laboratory environment, it is the responsibility of the end user to determine the suitability of the products chosen for an end application.

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