

8300 Series UV Rotary Screen Ink is formulated specifically for roll label applications. The 8300 Series exhibits exceptional print characteristics such as adhesion to a wide range of substrates, high gloss, abrasion resistance and excellent chemical resist.

### **SUBSTRATES**

Pressure sensitive vinyls, coated paper and board, top coated and print treated polyester, BOPP films, polyethylene and polystyrene.

### **USER INFORMATION**

#### **MESH**

Rotary Screen: Use rotary screens which will deposit 5 to 15 microns of ink film thickness. Flat Screens: Use 305 - 420 tpi (120-165 tpcm) monofilament polyester mesh.

#### **STENCIL**

Solvent resistant, UV ink compatible direct emulsions and capillary films

#### **SQUEEGEE**

65-90 durometer polyurethane squeegee

#### **COVERAGE**

2500 - 3500 square feet (232 – 325 square meters) per gallon depending upon ink deposit

#### **PRINTING**

The 8300 Series inks have excellent adhesion to a wide variety of substrates. Surface energy of substrates should be at least 40 dynes/cm to achieve proper adhesion. The use of in-line, on press corona treatment can increase the dyne level of many substrates.

The 8300 Series ink is formulated to be press ready. Thoroughly mix the ink prior to printing.

Maintain ink temperature at 65°-90°F (18°-32°C) for optimum print and cure performance. Lower temperatures increase the ink viscosity, impairing both flow and cure. Elevated temperatures lower the ink viscosity, reducing print definition, film thickness and opacity.

Pretest to determine optimum printing performance for a particular set of ink, substrate, screen, press, and curing variables/conditions.

### **CURE PARAMETERS**

8300 Series ink cures when exposed to a medium pressure mercury vapor lamp set at 300 - 600 watts per inch at web speeds of up to 250 ft/min. Cure parameters must be determined under actual production conditions.

### **CLEARS / VARNISHES/TRANSPARENT WHITE**

Mixing Clear / Metallic Mixing Clear/Transparent White: Use 8327 Mixing/Overprint Clear to reduce the density of colors or as a clear base for special effects additives such as Metallics.

83410 Transparent White is non- silicone to reduce the density of the 83400 colors or as a clear base for special effects additives such as Metallics.

Overprint Clear: Use 8327 Mixing/Overprint Clear to provide added surface protection, improve gloss, abrasion and chemical resistance.

### **ADDITIVES**

All additives should be thoroughly mixed into the ink before each use. Prior to production, test any additive adjustment to the ink.

Reducer: Use RE200 UV Reducer to reduce the viscosity of these inks. Add up to 10% by weight.

### **CLEAN UP**

Use NWC10 for clean up.

### **STORAGE**

Inks react to light and temperature. Store tightly covered at temperatures between 65°-90°F (18°-32°C). Ink taken from the press should not be returned to the original container; store separately to avoid contaminating unused ink.

## **GENERAL INFORMATION**

### **INK HANDLING**

Wear gloves and barrier cream to prevent direct skin contact. Safety glasses are suggested in areas where ink may be splashed. If ink does come in contact with skin, wipe ink off with a clean, dry cloth (do not use solvent or reducer). Wash the affected area with soap and water. Consult the 8300 Material Safety Data Sheet for further instructions and warnings. The 8300 is a one-part, 100% solids UV-curable screen printing ink and does not contain N-vinyl-2-pyrrolidone (trade name V-Pyrol®).

## ADHESION TESTING

It is imperative to check adhesion on a **cooled down** print:

1. Touch of ink surface – the ink surface will be smooth and slick.
2. Thumb twist – the ink surface will not mar or smudge.
3. Scratch surface – the ink surface will resist scratching.
4. Tape test – apply 3M #610/810 clear tape, rub-down, and rip off at a 180 degree angle. Ink should not come off.

## PRODUCT OFFERING

### STANDARD PRINTING COLORS

The 8300 series Standard Printing Colors have excellent opacity, flow characteristics, and are intended to work well as supplied.

The 83400 base colors and 8376 No-Sil Combination White are designed to be overprinted by other printing technologies such as 9300 Series UV Flexo, (see 9300 Series technical data sheet for more information).

### PANTONE MATCHING SYSTEM® BASE COLORS

The 8300 Pantone Matching System® Base Colors are used to simulate the Pantone® Color Formulation Guide. These inks are press ready, can be used in matches to achieve Pantone® color simulations, or let down with mixing clear. The ColorStar® Color Management System software provides blend formulations using Pantone Matching System® Base Colors. These blend formulations are also available at [www.nazdar.com](http://www.nazdar.com).

360 Series Colors: 83360-83369 colors are formulated to have no white or opaque pigments. This allows the colors to be more vibrant and allows for a better match of intense and darker colors. Any white needed to match a color is added as the 83358 Tinting White.

### FLUORESCENT COLORS

The 8300 series fluorescent colors have the tendency to settle; so high speed mixing is required prior to printing. Fluorescent colors fade with exposure to ultraviolet light. This includes outdoor exposure as well as UV lamp exposure. It is therefore recommended to adjust art so these colors are the final colors printed on any image.

## SPECIAL EFFECT ADDITIVES

When inks are to be printed over a metallic color, the overprinting ink(s) must be evaluated for intercoat adhesion before proceeding with the production run. To maximize intercoat adhesion, metallic colors should be printed as late as possible in the print sequence. Pigments may settle in the container; prior to printing, thoroughly mix the ink.

Metallics: Silver (aluminum) add up to 10% by weight, Gold (bronze) add up to 20% by weight. Mix only enough metallic ink to be used the same day. Chemical reactions in metallic inks may result in viscosity, color and printability changes over time.

## PACKAGING

The Opaque Whites are available in 11 lb and 50 lb containers, Mixing/Overprints Clears are available in 8 lb and 40 lb containers, all other colors are available in 9 lb and 45 lb containers.

Additives/Reducers are available in quart and gallon containers.

Cleaners are available in 8 lb, 40 lb and 468 lb gallon containers.

Pantone Matching System® Base Colors	83300 Silicone	83400 Non-Silicone
Transparent White	N/A	83410
Tinting White	83358	83458
Tinting Black	83359	83459
Orange	83360	83460
Yellow	83361	83461
Warm Red	83362	83462
Rubine Red	83363	83463
Rhodamine Red	83364	83464
Purple	83365	83465
Violet	83366	83466
Reflex Blue	83367	83467
Process Blue	83368	83468
Green	83369	83469

<b>Standard Printing Colors</b>	<b>Stock No.</b>	
No-Sil Combination White	N/A	8376
High Intensity White	8378	N/A
High Intensity Black	8379	N/A
Mixing/Over Print Clear	8327	N/A
<b>Fluorescent Colors</b>	<b>Stock No.</b>	
Orange Yellow	83520	N/A
Orange	83530	N/A
Orange/red	83540	N/A
Red	83550	N/A
Cerise	83560	N/A
Pink	83570	N/A
Blue	83580	N/A
Green	83590	N/A
Magenta	83600	N/A
<b>Additives/Reducers</b>	<b>Stock No.</b>	
UV Reducer	RE200	N/A
<b>Cleaners</b>	<b>Stock No.</b>	
EZ Cleaner	NWC10	N/A

*Nazdar® stands behind the quality of this product. Nazdar® cannot, however, guarantee the finished results because Nazdar® exercises no control over individual operating conditions and production procedures. While technical information and advice on the use of this product is provided in good faith, the User bears sole responsibility for selecting the appropriate product for their end-use requirements. Users are also responsible for testing to determine that our product will perform as expected during the printed item's entire life-cycle from printing, post-print processing, and shipment to end-use. This product has been specially formulated for screen printing, and it has not been tested for application by any other method. Any liability associated with the use of this product is limited to the value of the product purchased from Nazdar®.*

Based on information from our raw material suppliers, these products are formulated to contain less than 0.06% lead. If exact heavy metal content is required, independent lab analysis is recommended.

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