

c9700 Series All Purpose Screen Ink is a high gloss, solvent-based screen ink formulated to perform on a wide variety of substrates, such as paper, card stock, polystyrene, vinyl, Tyvek®, coated polyester, rigid vinyl, acrylic and many synthetic paper stocks. 9700 Series is for indoor and outdoor POP advertising and display applications.

SUBSTRATES Styrene, coated paper and card stock, rigid vinyl, synthetic stocks and plastics

USER INFORMATION

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. See full disclaimer at the end of the document.

MESH 230-355 tpi (90-140 tpcm) monofilament polyester mesh for most applications

STENCIL Solvent resistant direct emulsions and capillary films

SQUEEGEE 70-80 durometer polyurethane squeegee

COVERAGE 1,400-2,000 square feet (130 - 185 square meters) per gallon depending upon ink deposit

PRINTING Add only enough ink to the screen to be able to print for 5-10 minutes. Add additional ink in small increments throughout the print run to maintain screen stability. Thoroughly mix the inks prior to printing.

Maintain ink temperatures at 65°-90°F (18°-32°C) for optimum print drying performance. Lower temperatures increase the ink viscosity, impairing both flow and drying. 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 drying variables/conditions.

DRYING 9700 Series ink will air dry in 15-20 minutes at normal room temperature. Force drying is achieved in 40-60 seconds at 90°-150°F (32°-66°C). It is important to have good air flow to help remove solvents and accelerate drying. If the temperature is too high without good air flow, blocking may occur when the sheets are stacked warm.

CLEAR / VARNISHES Overprint Clear / Mixing Clear / Metallic Mixing Clear: Use 9727 Mixing/Overprint Clear as an overprint clear to provide added surface protection and extend outdoor durability. Use as a mixing clear to reduce the density of colors or as a clear base for specialty additives such as Metallics.

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 RE180 Thinner or RE185 Fast Thinner to reduce the viscosity of these inks. Add up to 20% by weight.

Retarder: Use 9731 Retarder to slow drying. Add up to 10% by weight.

Adhesion Promoter: Use NB72 Catalyst to provide additional adhesion to certain surfaces, such as corrugated polypropylene and some coated metals. The addition of NB72 Catalyst can cause yellowing of the ink film upon exposure to sunlight. Use NB80 Adhesion Promoter instead of NB72 Catalyst to reduce the potential for yellowing. Add up to 10% by weight. Ink mixed with NB72 Catalyst or NB80 Adhesion Promoter has a 6-12 hour pot life.

Gloss / Flattening Powders / Improved Slip: Use 9748 Flattening Paste to prevent blocking on highly plasticized substrates and coated card stocks. Use 9748 Flattening Paste to prevent the ink from penetrating into Tyvek®. Add up to 20% by weight.

CLEAN UP

Screen Wash (Prior to Reclaim): Use IMS201 Premium Graphic Screen Wash

Press Wash (On Press): Use IMS301 Premium Graphic Press Wash

STORAGE

The inks react to 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

All personnel mixing and handling these products must wear gloves and eye protection. Clean up spills immediately. If ink does come in contact with skin, wipe ink off with a clean, dry, absorbent cloth (do not use solvent or thinner). Wash the affected area with soap and water. Consult the 9700 Series Material Safety Data Sheet for further instructions and warnings.

ADHESION TESTING

1. Touch of ink surface – the ink will be dry.
2. Thumb twist – the ink surface will not mar or smudge.
3. Scratch surface – the ink will resist scratching.
4. Cross hatch tape test – use a cross hatch tool or a sharp knife to cut through ink film only; then apply 3M #600 clear tape on cut area, rub down, wait for 1 minute and rip off at a 180 degree angle. Ink should only come off in actual cut areas.

WEATHERING / OUTDOOR DURABILITY

At full strength and properly dried, 9700 colors are formulated to provide 2 years outdoor durability. Overprinting with 9727 Mixing/Overprint Clear increases the projected outdoor durability.

Outdoor durability cannot be specified exactly. Slight color change and loss of gloss should be expected. Variables affecting a printed part's durability include:

- Ink film thickness and degree of curing
- Color formulation:
 - Adding large amounts of mixing clear or white to any color
 - Mixing several colors to achieve a specific color
 - Mixing a small quantity of any single color with any other color
- Substrate type and age
- Mounting angle or directional orientation
- Geographical location
- Air pollution
- Exposure to excessive abrasion
- Non-clear coated prints exhibit more color change and loss of gloss

PRODUCT OFFERING

STANDARD PRINTING COLORS

Standard Printing Colors have excellent opacity and flow characteristics.

PANTONE MATCHING SYSTEM® BASE COLORS

Pantone Matching System® Base Colors are used to simulate the Pantone® Formulation Guide. These inks can be used in matches to achieve Pantone® color simulations, used at full color strength, or let down with mixing clear. The ColorStar® Color Management System software uses Pantone Matching System® Base Colors. These color formulations are also available at www.nazdar.com.

60 Series Colors: 9760-9769 colors have a high pigment concentration. These colors are formulated to have some white pigment or opaque pigment in order to increase opacity.

HALFTONE COLORS

Halftone Extender Base is used to reduce the density of any of the halftone colors.

Halftone Colors are formulated with increased densities in order to have the flexibility to satisfy most process color density requirements.

TONERS

Toners are clean, transparent colors. These inks can be used in color matches or let down with mixing clear.

TRANSPARENT COLORS

Transparent Colors are clean and transparent. These can be used in color matches or let down with mixing clear.

SPECIAL ADDITIVES

When inks are to be printed over a special effect color, the overprinting ink(s) must be evaluated for intercoat adhesion before proceeding with the production run. To maximize intercoat adhesion, specialty 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.

The following special effect pigments may be added to the 9700 Series inks. These pigments are available in 1-pound containers. Contact Nazdar for the item number(s) and availability of each special effect product.

Metallics: Silver (aluminum) 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.

Pearlescents / Interference / Multi-Chromatic: See the Pearlescent, Interference, and Multi-Chromatic Technical Data Sheets for more information.

COLOR CARD MATERIALS

The following is a list of screen printed samples available.

Conventional Color Card: shows the Standard Printing Colors, Pantone Matching System® Base Colors, Halftone Colors

Special Effects Color Card: shows Metallic, Pearlescent, Interference, and Multi-Chromatic effects mixed with clear

PACKAGING

All items listed below are available in quart and gallon containers.

'LF' ITEM NUMBERS

Colors with an item number containing 'LF' indicate a lead-free alternative that replaced a lead containing color. All colors listed in this document are lead-free.

| Stock Number | Standard Printing Colors | Stock Number | Pantone Matching System® Base Colors |
|--------------|--------------------------|--------------|--------------------------------------|
| 97LF10 | Primrose Yellow | 9758 | Tinting White |
| 97LF11 | Lemon Yellow | 9759 | Tinting Black |
| 97LF12 | Medium Yellow | 9760 | Orange |
| 97LF13 | Emerald Green | 9761 | Yellow |
| 97LF18 | Scarlet Red | 9762 | Warm Red |
| 9719 | Fire Red | 9763 | Rubine Red |
| 97LF20 | Brilliant Orange | 9764 | Rhodamine Red |
| 9721 | Peacock Blue | 9765 | Purple |
| 9722 | Ultra Blue | 9766 | Violet |
| 9724 | Black | 9767 | Reflex Blue |
| 9727 | Mixing/Overprint Clear | 9768 | Process Blue |
| 9775 | Super Opaque White | 9769 | Green |
| Stock Number | Halftone Colors | | |
| 97HTEX | Halftone Extender Base | | |
| 97HTB | Halftone Blue | | |
| 97HTR | Halftone Red | | |
| 97HTY | Halftone Yellow | | |
| 97HTBK | Halftone Black | | |

| Stock Number | Toners | Stock Number | Transparent Colors |
|--------------|-----------------|--------------|---------------------|
| 9780 | Yellow Toner | 97PB12 | Trans Medium Yellow |
| 9781 | Orange Toner | 97PB18 | Trans Red |
| 9782 | Carmine Toner | 97PB60 | Stop Sign Red |
| 9783 | Magenta Toner | | |
| 9784 | Maroon Toner | | |
| 9785 | Green Toner | | |
| 9786 | Blue Toner (GS) | | |
| 9787 | Blue Toner (RS) | | |
| 9788 | Violet Toner | | |
| 9789 | Red Toner | | |

PACKAGING

Additives/Reducers are available in quart and/or gallon containers.
Cleaners are available in gallon, 5 gallon and 55 gallon containers.

| Stock Number | Additives/Reducers | Stock Number | Clean Up |
|--------------|--------------------------------|--------------|-----------------------------|
| 9731 | Retarder (gallons only) | IMS201 | Premium Graphic Screen Wash |
| 9748 | Flattening Paste | IMS301 | Premium Graphic Press Wash |
| NB72 | Catalyst (quart only) | | |
| NB80 | Adhesion Promoter (quart only) | | |
| RE180 | Thinner | | |
| RE185 | Fast Thinner | | |

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.

Nazdar Worldwide Headquarters
8501 Hedge Lane Terrace, Shawnee, KS 66227-3290 USA
Toll Free: 866.340.3579 or Tel: 913.422.1888 Fax: 913.422.2296
e-mail: custserv@nazdar.com

Nazdar Limited
Barton Road, Heaton Mersey, Stockport, England SK4 3EG
Tel: + (44) 0.161.442.2111 Fax: + (44) 0.161.442.2001
e-mail: technicalservicesuk@nazdar.com

<http://www.nazdar.com>