Nazdar 9700 Series All Purpose Screen Ink

NAZDAR®
Ink Technologies

9700 Series All Purpose Screen Ink is a high gloss, solvent-based screen ink formulated to perform on a wide variety of substrates. 9700 Series is for indoor and outdoor POP advertising and display applications.

Substrates

- Styrene
- Coated Paper
- Coated Card Stock
- Vinyl
- Rigid Vinyl
- Tyvek®
- Acrylic
- Some Synthetic Plastics

Substrate recommendations are based on commonly available materials intended for the ink's specific market when the inks are processed according to this technical data. 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. Reference the 'Quality Statement' at the end of this document.

User Information

Mesh

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

Stencil

Use direct emulsions and capillary films which are solvent resistant.

Squeegee

70 - 80 durometer polyurethane squeegee.

Coverage

Estimated 1,400 - 2,000 square feet (130 -185 square meters) per gallon depending upon ink deposit. Reference www.nazdar.com for examples of coverage calculations.

Printing

When printing 9700 Series All Purpose Screen Ink 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 ink prior to printing. Improper mixing can lead to inconsistent color and ink performance.

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

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

Nazdar does not recommend inter-mixing of 9700 Series Ink with other inks besides the 9700 Series Ink.

Drying Parameters

9700 Series Ink dries by solvent evaporation at room temperature in 15 – 20 minutes. 9700 Series Ink can also be force dried at 90°-150°F (32°-66°C) in 40 - 60 seconds. Good air circulation is necessary to remove the vaporized solvents. Multiple layers of ink may require longer drying times than a single layer.

Clears / Varnishes

Mixing Clear: Use 9727 Mixing/Overprint Clear to reduce the density of colors or as a clear base for specialty additives such as Metallics.

Overprint Clear: Use 9727 Mixing/Overprint Clear to provide added surface protection and increase durability.

Common Performance Additives

The market specific performance properties of the 9700 Series All Purpose Screen Ink should be acceptable for most applications without the need for additives. When required, any additives should be thoroughly mixed before each use. Prior to production, test any additive adjustment to the ink. Inks containing additives should not be mixed with other inks.

Example for additives- Ink at 100g with 8% of an additive is calculated as:

100g ink + 8g additive = 108g total

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

Adhesion Promoter: Use NB72 Catalyst to enhance adhesion on certain surfaces such as corrugated polypropylene and some coated metals. Add up to 10% by weight. NB72 may Cause printed ink to yellow with sunlight exposure. For applications where Sunlight exposure is required use NB80 adhesion promoter to reduce the potential of yellowing. Ink mixed with NB72 Catalyst or NB80 Adhesion Promoter has a 6 - 12 hour pot life.

Flattening Powders: Use 9748 Flattening Paste to prevent blocking on highly plasticized substrates and coated card stock. 9748 can also be used to prevent the 9700 Series ink from penetrating into Tyvek®. Add up to 20% by weight.

Cleanup

Screen Wash (Prior to Reclaim): Use IMS201 Premium Graphic Screen Wash, IMS203 Economy Graphic Screen Wash, or IMS206 Graphic Auto Screen Wash.

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

Storage / Shelf Life

Store closed containers at temperatures between 65°- 90°F (18°- 32°C). Storing products outside of these recommendations may shorten their shelf life. Ink taken from the press should not be returned to the original container; store separately to avoid contaminating unused ink.

Standard 9700 Series All Purpose Screen Ink items are useable for a period of at least 48 months from the date of manufacture. To obtain the official shelf life letter, Contact Nazdar Technical Service at InkAnswers@nazdar.com or see contact listing at the end of this document.

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 applicable Material Safety Data Sheet (MSDS) for further instructions and warnings.

For assistance on a wide range of important regulatory issues, consult the following Regulatory Compliance Department link at www.nazdar.com/health_safety.asp or contact Nazdar Ink Technologies - World Headquarters (see contact listing at the end of this document).

Adhesion Testing

1. Touch of ink surface – the ink surface should be smooth.
2. Thumb twist – the ink surface should not mar or smudge.
3. Scratch surface – the ink surface should resist scratching.
4. Cross hatch tape test – per the ASTM D-3359 method, 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, 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 cured, 9700 Series All Purpose Screen Ink colors are formulated to provide 2 years outdoor durability when mounted vertically in the Central U.S.A. The use of 9727 Mixing/Overprint Clear increases 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 drying
- Color formulation:
  - Large amounts of mixing clear or white
  - Mixing several colors into one match
  - Mixing a small quantity of any single color in a match
- Substrate type and age
- Mounting angle and directional orientation
- Geographical location
- Degree of air pollution
- Excessive abrasion
- Non-clear coated prints exhibit more color change and loss of gloss

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Manufacturer's Product Offering

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

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 are press ready, can be used in matches to achieve Pantone color simulations, or let down with mixing clear. ColorStar® Color Management System software uses Pantone Matching System Base Colors to match Pantone colors. Blend formulations are also available at www.nazdar.com using ColorStar On-Line.

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

"LF" Item Numbers

Colors with an item number containing "LF" are lead-free alternatives that replaced a lead containing color. All Nazdar manufactured inks are lead-free.

Special Effect Pigments

When inks are to be printed with a special effect color, all ink layers must be evaluated for intercoat adhesion before proceeding with the production run. Pigments may settle in the container; prior to printing, thoroughly mix the ink.

The following special effect pigments may be added to 9700 Series All Purpose Screen Ink. Contact Nazdar for the item number(s) and availability of special effect products. Technical

Data Sheets for each of the following special effect pigments can be found at www.nazdar.com.

Metallic Silver (aluminum): Add up to 8% by weight.

Metallic Gold (bronze): Add up to 15% by weight.

Chemical reactions in metallic inks may result in viscosity, color and printability changes over time; due to this, mix only enough metallic ink to be used the same day.

Pearlescent / Interference: Add up to 20% by weight.

Multi-Chromatic: Add up to 10% by weight.

Phosphorescent: Add up to 40% by weight.

Fluorescents: Add up to 40% by weight. Fluorescent colors fade quickly with exposure to ultraviolet light.

Color Card Materials

The following is a list of available screen printed samples of the 9700 Series All Purpose Screen Ink.

Conventional Color Card (CARD375): shows the Standard Printing Colors, Pantone Matching System Base Colors, and Halftone Colors.

Packaging / Availability

Contact your Nazdar distributor for product availability and offering.

Standard Ink Items

Standard ink items listed below are inventoried in gallon containers.

Printing Colors

Item Number	Color
97LF10	Primrose Yellow
97LF11	Lemon Yellow
97LF12	Medium Yellow
97LF13	Emerald Green
9719	Fire Red
97LF20	Brilliant Orange
9721	Peacock Blue
9722	Ultra Blue
9724	Black
9727	Mixing/Overprint Clear
9775	Super Opaque White

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v 9 EN

Ref: v 8 EN

Pantone Matching System® Base Colors

Item Number	Color
9758	Tinting White
9759	Tinting Black
9760	Orange
9761	Yellow
9762	Warm Red
9763	Rubine Red
9764	Rhodamine Red
9765	Purple
9766	Violet
9767	Reflex Blue
9768	Process Blue
9769	Green

Halftone Colors

Item Number	Color
97HTEX	Halftone Extender Base
97HTB	Halftone Blue
97HTR	Halftone Red
97HTY	Halftone Yellow
97HTBK	Halftone Black

Non-Standard Ink Items

Non-Standard ink items listed below are special order, non-inventoried colors which may require additional lead time. These items are available in gallon containers.

Non-Standard Printing Colors

Item Number	Color
97LF18	Scarlet Red
97PB12	Trans Medium Yellow
97PB18	Transparent Red
97PB60	Stop Sign Red
9780	Yellow Toner
9781	Orange Toner
9782	Carmine Toner
9783	Magenta Toner
9784	Maroon Toner
9785	Green Toner
9786	Blue Toner (GS)
9787	Blue Toner (RS)
9788	Violet Toner
9789	Red Toner

Additives / Reducers

Item Number	Description
9731	Retarder (Gallons only)
9748	Flattening Paste
NB72	Catalyst (Quart only)
NB80	Adhesion Promoter (Quarts only)
RE180	Thinner
RE185	Fast Thinner

Cleaners / Clean Up

Item Number	Description
IMS201	Premium Graphic Screen Wash
IMS203	Economy Graphic Screen Wash
IMS206	Graphic Auto Screen Wash
IMS301	Premium Graphic Press Wash

Nazdar Quality Statement

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®.

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