Nazdar 9700 Series All Purpose Screen Ink

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

Coated paper / Coated cardstock
Rigid vinyl (PVC)
Styrene / Polystyrene (PS)
Acrylonitrile-Butadiene-Styrene (ABS)

Substrate Material(s) listed below may be Limited in Adhesion *(testing highly recommended for each print run)*
Pressure sensitive vinyl (PVC)
Vinyl banner (PVC)
Static Cling / Window Cling (PVC)

Use an Adhesion Promoter for the following substrates (see additives section).
High Density Polyethylene sheeting (HDPE)
Treated fluted/corrugated polypropylene (PP)

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.

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
Depending upon ink deposit, the estimated coverage per gallon: 1,400 - 2,000 square feet (130 -185 square meters) per gallon depending upon ink deposit.
Reference www.nazdar.com/en-us/ColorStar for examples of coverage calculations.

Screen 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 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 cure 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 curing variables/conditions.

Nazdar does not recommend inter-mixing this ink series with other inks or series.

Pad Printing
These Solvent-based inks can be pad printed. The use of thinners or retarders may be required to achieve the correct transfer. Please follow the printing and drying guidelines.

Drying / Curing Parameters
This series by solvent evaporation at room temperature in 15 – 20 minutes; also be force dried at 90°-150°F (32°-66°C) in 40 - 60

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seconds. Good air circulation is necessary to remove the vaporized solvents. Multiple layers of ink may require longer drying times than a single layer.

Adhesion Testing
- Touch of ink surface – the ink surface should be smooth.
- Thumb twist – the ink surface should not mar or smudge.
- Scratch surface – the ink surface should resist scratching.
- 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.

Cleanup
For screen cleaning, similar products to those listed below may be used.

Screen Wash (Prior to Reclaim): Use IMS201 Premium Graphic Screen Wash or IMS203 Economy Graphic Screen Wash
Press Wash (On Press): IMS301 Premium Graphic Press Wash.

Ink Modifications

Clears / Varnishes
Mixing Clear/Metallic Clear: use to reduce the density of colors or as a clear base for specialty additives such as Metallic additives.
Overprint Clear: use to provide added surface protection and increase durability.

Additives
The market specific performance properties of this ink series / ink item 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

Reducer / Thinner
Use RE181 Thinner/ Retarder or RE185 Fast Thinner to reduce the viscosity of these inks. Add up to 20%.

Adhesion Promoter
Use NB72 Catalyst to enhance adhesion on certain surfaces such as corrugated polypropylene and some coated metals. Add up to 10%. 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. NB80 is sensitive to humidity and moisture; clean the lid and container thoroughly after each use to prevent fusing of the container.

Gloss / Flattening Powders / Improved Slip
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%.

General Information
Handling
Refer to the SDS for recommendations on handling.
Wear gloves and barrier cream to prevent direct skin contact. Safety glasses are suggested in areas where ink may be splashed. If product 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 applicable Safety Data Sheet (SDS / MSDS) for further instructions and warnings.
For assistance on a wide range of important regulatory issues, consult the following Regulatory Compliance Department link at http://www.nazdar.com or contact Nazdar Ink Technologies - World Headquarters (see contact listing at the end of this document).

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Weathering / Outdoor Durability
At full strength and properly cured, the outdoor durability when mounted vertically in the Central U.S.A: **2 years**
Outdoor durability can be increased by applying an overprint clear.

Outdoor Durability Variables
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: large amounts of mixing clear or white, mixing several colors into one match, and/or mixing a small quantity of any single color
- 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.

Storage / Shelf Life
Store closed containers at temperatures between 65°-78°F (18°-25°C). Storing products outside of these recommendations may shorten their shelf life.
Standard items useable for a period of at least **48 months** from the date of manufacture.

Shelf life above applies to the standard ink items listed on this TDS. To obtain the shelf life for special inks and additives, contact Nazdar Customer Service or Nazdar Technical Service. See contact listing at the end of this document.

Standard Color Range
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.

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

Standard Halftone Colors are formulated with hues and densities common to the graphic industry.

Standard Printing Colors
Standard Printing Colors have excellent opacity over a variety of substrates.

High Opacity Colors have been formulated to achieve hard to match red, orange and yellow colors over dark substrates.

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

Pantone Base Colors
Pantone Matching System Base Colors are used to simulate the Pantone® Formulation Guide when printed on a white substrate. 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: 61-69 colors have a high pigment concentration. These colors are formulated to have some white pigment or opaque pigment to increase opacity.

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

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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 ink. Contact Nazdar for the item number(s) and availability of special effect products or they can be found at www.nazdar.com.

Metallic Silver (aluminum), add up to: 8%
Metallic Gold (bronze), add up to: 15%
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%
Multi-Chromatic, add up to: 10%
Phosphorescent, add up to: 40%

Fluorescents, add up to: 40%
Fluorescent colors fade quickly with exposure to ultraviolet light.

Color Card Materials
The following is a list of available literature representing this ink series.
- Conventional Color Card (CARD375): shows the Standard Colors, Pantone Matching System Base Colors, and Halftone Colors.

Packaging / Availability
Contact your Nazdar distributor for product availability and offering.

Item Type	Item Number	Item (or Color) Description
Standard Colors	97LF10	Primrose Yellow
Standard Colors	97LF11	Lemon Yellow
Standard Colors	97LF12	Medium Yellow
Standard Colors	97LF13	Emerald Green
Standard Colors	97LF18	Scarlet Red
Standard Colors	9719	Fire Red
Standard Colors	97LF20	Brilliant Orange
Standard Colors	9721	Peacock Blue
Standard Colors	9722	Ultra Blue
Standard Colors	9724	Black
Standard Colors Clears / Varnishes	9727	Mixing/Overprint Clear
Standard Colors Clears / Varnishes	9775	Super Opaque White
Standard Colors	97PB12	Trans Medium Yellow
Standard Colors	97PB18	Transparent Red
Standard Colors	97PB60	Stop Sign Red
Pantone Base Colors	9758	Tinting White
Pantone Base Colors	9759	Tinting Black
Pantone Base Colors	9760	Orange
Pantone Base Colors	9761	Yellow
Pantone Base Colors	9762	Warm Red
Pantone Base Colors	9763	Rubine Red
Pantone Base Colors	9764	Rhodamine Red
Pantone Base Colors	9765	Purple
Pantone Base Colors	9766	Violet
Pantone Base Colors	9767	Reflex Blue
Pantone Base Colors	9768	Process Blue
Pantone Base Colors	9769	Green
Halftone Colors	97HTEX	Halftone Extender Base
Halftone Colors	97HTB	Halftone Blue
Halftone Colors	97HTR	Halftone Red

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Halftone Colors	97HTY	Halftone Yellow
Halftone Colors	97HTBK	Halftone Black
Standard Colors	9780	Yellow Toner
Standard Colors	9781	Orange Toner
Standard Colors	9782	Carmine Toner
Standard Colors	9783	Magenta Toner
Standard Colors	9784	Maroon Toner
Standard Colors	9785	Green Toner
Standard Colors	9786	Blue Toner (GS)
Standard Colors	9787	Blue Toner (RS)
Standard Colors	9788	Violet Toner
Standard Colors	9789	Red Toner
High Opacity Colors	97700	Opaque Orange
High Opacity Colors	97701	Opaque Yellow
High Opacity Colors	97703	Opaque Red
Additives	9731	Retarder (Gallons only)
Additives	9748	Flattening Paste
Additives	NB72	Catalyst (Quart only)
Additives	NB80	Adhesion Promoter (Quarts only)
Additives	RE181	Thinner/ Retarder
Additives	RE185	Fast Thinner
Cleaners	IMS201	Premium Graphic Screen Wash
Cleaners	IMS203	Economy Graphic Screen Wash
Cleaners	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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