Nazdar 4700 Series Water-Based Screen Ink

4700 Series Screen Ink is a water-based, multi-purpose graphic ink that produces a glossy ink film, offers good weather resistance and is flexible enough for shallow draw (2 to 4 inches) vacuum forming.

Substrates
Coated paper / Coated cardstock
Cardboard
Styrene (PS)
Pressure sensitive vinyl (PVC)
Static Cling (PVC)
Top coated / Print treated polyester (PET)
Polycarbonate (PC)

Substrate Material(s) listed below may be Limited in Adhesion *(testing highly recommended for each print run)*
Some Coated Metals

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
180-305 tpi (71-120 tpcm) monofilament polyester mesh for most applications.

Stencil
Use direct emulsions and capillary films which are water resistant.

Squeegee
70-90 durometer polyurethane squeegee.

Coverage
Depending upon ink deposit, the estimated coverage per gallon: 2,000 – 3,000 square feet (185 - 278 square meters)
Reference www.nazdar.com/en-us/ColorStar for examples of coverage calculations.

Screen Printing
May be thinned to achieve proper ink flow (see Additives section). 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 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.
Inter-mixing 4700 Series with other waterbased ink series like 2700 Series will result in flow / printability issues that cannot be corrected with additives.

Drying / Curing Parameters
Dries by evaporation in 20-30 minutes depending on temperature and humidity. Jet dry at 150°- 170°F (66°- 77°C) for approximately 30-45 seconds using maximum air flow through the oven. Adequate cooling may be necessary to avoid blocking problems when stacked.

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.

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NAZDAR
INK TECHNOLOGIES

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

Screen Wash (Prior to Reclaim): Use 2537 Screen Wash or 2738 Heavy Duty Screen Wash.
Press Wash (On Press): Use 2537 Screen Wash

Ink Modifications

Clears / Varnishes
Mixing Clear / Overprint Clear: Use to reduce the density of colors and to provide added surface protection. foaming or flow issues are experienced during printing, add additional thinner until required flow-out is achieved.
Heavy Body Mixing Clear base to increase the viscosity and reduce the density of colors.

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 2732 Thinner to reduce the viscosity of these inks. Add up to 10%. Adding more than 10% thinner will raise the VOC level above 3.5 lbs. per gallon. If the ink dries too slowly, use water instead of 2732 Thinner to reduce the viscosity. Add up to 15%.

Retarder
Use RE192 Retarder to slow drying times. Add up to 10%.

Adhesion Promoter
Use AQ58 Aquacat to enhance adhesion on to coated metal and flat polyolefin stock. Add up to 10%. Ink mixed with AQ58 Aquacat has a 6-8 hour pot life.

Gloss / Flattening Powders / Improved Slip
Use 4748 Flattening Paste to reduce gloss, improve slip, and prevent blocking on highly plasticized substrates and card stocks. 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).

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.
Useable for a period of at least **24 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

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heavy metal content is required, independent lab analysis is recommended.

Standard Printing Colors
Standard Printing Colors: have excellent opacity and flow characteristics. These colors are intended to work as supplied.

Toners
Toners are highly concentrated, clean transparent colors. These inks are press ready and can be used in color matches.

Packaging / Availability
Contact your Nazdar distributor for product availability and offering.
Standard Colors
Standard ink items listed below are inventoried in 1 kilogram and gallon containers

Item Type	Item Number	Item (or Color) Description
Standard Colors	4710	Primrose Yellow
Standard Colors	4711	Lemon Yellow
Standard Colors	4712	Medium Yellow
Standard Colors	4713	Emerald Green
Standard Colors	4719	Fire Red
Standard Colors	4720	Brilliant Orange
Standard Colors	4721	Peacock Blue
Standard Colors	4722	Ultra Blue
Standard Colors	4724	Black
Standard Colors	4727	Overprint Clear
Standard Colors	4775	Super Opaque White
Standard Colors	4782	Carmine Toner
Standard Colors	4783	Magenta Toner
Standard Colors	4785	Green Toner (GS)
Standard Colors	4786	Blue Toner (GS)
Standard Colors	4787	Blue Toner (RS)
Standard Colors	4788	Violet Toner
Standard Colors	47HTEX	Extender Base
Additives	2732	Thinner
Additives	4748	Flattening Paste
Additives	AQ58	Aquacat
Additives	RE192	Retarder
Cleaners	2537	Screen Wash
Cleaners	2738	Heavy Duty Screen 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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