

**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.**

v 2 EN

Ref: v 1 EN

## Substrates

- Coated paper
- Cardboard
- Pressure sensitive vinyl
- Top-coated polyester
- Static cling
- Polycarbonate
- Some coated metal
- Styrene

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

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

Estimated 2,000 – 3,000 square feet (185 - 278 square meters) per gallon depending upon ink deposit. Reference [www.nazdar.com](http://www.nazdar.com) for examples of coverage calculations.

### Printing

4700 Series ink 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 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 variables/conditions.

Nazdar does not recommend inter-mixing of 4700 Series ink with other inks besides the 4700 Series ink. Inter-mixing 4700 Series with other water-based ink series like 2700 Series will result in flow / printability issues that cannot be corrected with additives.

## Drying Parameters

4700 Series ink 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.

## Clears / Varnishes

Overprint & Mixing Clear: Use 4727 Overprint Clear to reduce the density of colors or as an overprint clear. If foaming or flow issues are experienced during printing, add additional thinner until required flow-out is achieved.

Heavy Body Mixing Clear: Use 47HTEX Extender Base to increase the viscosity and reduce the density of colors.

## Common Performance Additives

The market specific performance properties of the 4700 Series 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:

$$100\text{g ink} + 8\text{g additive} = 108\text{g total}$$

Thinner: Use 2732 Thinner to reduce the viscosity of these inks. Add up to 10% by weight. Adding more than 10% thinner will raise the VOC level above 3.5 lbs. per gallon. If the ink dries too

Water-Based Screen Ink

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slowly, use water instead of 2732 Thinner to reduce the viscosity. Add up to 15% by weight.

**Retarder:** Use RE192 Retarder to slow drying times. Add up to 10% by weight.

**Adhesion Promoter:** Use AQ58 Aquacat to enhance adhesion on to coated metal and flat polyolefin stock. Add up to 10% by weight. 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% by weight.

## Cleanup

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

**Press Wash (On Press):** Use 2537 Screen Wash.

## Storage

Store closed containers at temperatures between 65°-78°F (18°-25°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 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).

### 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 crosshatch 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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## 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. 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 container size availability.

### Standard Ink Items

Standard ink items listed below are inventoried in 1-kilogram containers. Some colors are available in gallon containers.

Item Number	Color
4710	Primrose Yellow
4711	Lemon Yellow
4712	Medium Yellow
4713	Emerald Green
4719	Fire Red
4720	Brilliant Orange
4721	Peacock Blue
4722	Ultra Blue
4724	Black
4727	Overprint Clear
4775	Super Opaque White
4782	Carmine Toner
4783	Magenta Toner
4785	Green Toner
4786	Blue Toner (GS)
4787	Blue Toner (RS)

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Item Number	Color
4788	Violet Toner
47HTEX	Extender Base

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## Additives / Reducers

Item Number	Description
4748	Flattening Paste
2732	Thinner
RE192	Retarder
AQ58	Aquacat

## Cleaners / Clean Up

Item Number	Description
2537	Screen Wash
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®.*

## Nazdar Ink Technologies Offices

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