

Nazdar 4800 GLC LED Screen Inks are formulated specifically for glass container print applications. Nazdar 4800 GLC LED Screen Ink is a two-part ink system and must be initiated with 4800 Curing Agent, LED cured, and then post-baked to provide appropriate adhesion and resistance properties.

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## Substrates

- Glass Containers

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

305-420 tpi (120-165 tpcm) monofilament polyester mesh.

Coarser mesh counts not recommended at this time.

### Stencil

Use direct emulsions and capillary films which are solvent resistant and UV compatible.

### Squeegee

70-90 durometer polyurethane squeegee.

### Ink Preparation

4800 GLC LED Screen Ink is a two-part ink system and must be initiated with a catalyst prior to use.

#### For 4878 GLC High Intensity White :

Add 1 parts of NB4822 White Curing Agent to 10 parts of 4878 GLC White by weight.

#### For all other colors:

Add 1 part of the NB4820 Black Curing Agent to 10 parts of 4800 GLC ink by weight.

The amount of curing should be based only on the weight of the ink and not to include the weight of any other additive. The pot life of the ink + curing agent is approximately 5 – 7 hours.

## Printing

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, film thickness and pot life.

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 of 4800 GLC LED Screen Ink with other ink series.

## Cure Parameters

These guidelines are intended only as a starting point for determining cure parameters, which must be determined under actual production conditions. "Undercuring" the ink may result in poor adhesion and a tacky surface. "Overcuring" the ink may reduce the durability of the printed part and adhesion of subsequent ink layers.

LED Curing: 4800 GLC LED Screen Ink cures when exposed to an 8+ watt, 395-405 nm lamp at a distance of 0.15 to 0.25 inches (4 to 6 mm). Cure each layer of ink before printing another layer of ink.

## Post Baking

Once all layers of ink are printed, bake the LED cured printed parts at 160°C (320°F) for 20 minutes or 150°C (302°F) for 30 minutes.

## Clears / Varnishes

Overprint / Mixing Clear: Use the 4826 Mixing Clear as an overprint clear to provide a smooth printing surface; as a mixing clear to reduce color density; or as a clear to improve performance of hot foil stamping.

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## Common Performance Additives

**Reducer:** Use RE348 GLC Reducer to reduce the viscosity of these inks. Add up to 5% by weight. Over reduction can reduce print definition, film thickness, opacity, and adversely affect cure.

## 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°-78°F (18°-25°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 contamination unused ink.

Standard 4800 GLC LED Screen Ink items supplied in 1 gallon (4/5 kilo) containers or smaller are useable for a period of at least 24 months from the date of manufacture.

## 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) for further instructions and warnings.

4800 GLC LED Screen Ink does not contain N-vinyl-2-pyrrolidone (trade name V-Pyrol®).

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

Even when recommended UV energy output levels are achieved and prints are subjected to proper levels of post baking, it is imperative to check the degree of cure on a **cooled down** print:

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.

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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.

## Packaging / Availability

Check with your distributor for product availability.

## Standard Ink Items

Standard ink items listed below are inventoried in gallon containers.

Standard Printing Colors

Item Number	Color
4810	GLC Primrose Yellow
4812	GLC Medium Yellow
4819	GLC Fire Red
4826	GLC Mixing Clear
4878	GLC High Intensity White
4879	GLC High Intensity Black

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## Pantone Matching System® Base Colors

Item Number	Color
48360	GLC Orange
48361	GLC Yellow
48362	GLC Warm Red
48363	GLC Rubine Red
48364	GLC Rhodamine Red
48365	GLC Purple
48366	GLC Violet
48367	GLC Reflex Blue
48368	GLC Process Blue
48369	GLC Green

## Additives / Reducers

Item Number	Item Description
RE348	GLC Reducer
NB4820	Black Curing Agent
NB4822	White Curing Agent

## 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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