

PowerPrint® Fluorescent Series UV Screen Ink is a graphic POP ink that provides stable, pre-mixed fluorescent colors to be used for indoor graphics advertising applications on a wide range of plastics, coated papers and coated boards.

v 4 EN

Ref: v 3 EN

Substrates

- Styrene
- Rigid PVC
- Vinyl
- Some acrylics
- Some coated papers / cardstocks

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

305-355 tpi (120-140 tpcm) with a mesh opening of 50 um or less monofilament polyester.

Coarser mesh counts and/or twill weave result in heavier ink deposit and may require additional cure output.

Stencil

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

Squeegee

70-90 durometer polyurethane squeegee.

Coverage

Estimated 2,300 – 3,500 square feet (215 - 325 square meters) per gallon depending upon ink deposit. Reference www.nazdar.com for examples of coverage calculations.

Printing

PowerPrint Fluorescent Series is formulated to be press ready. 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 of PowerPrint Fluorescent Series with other inks besides the PowerPrint Fluorescent Series and PowerPrint 1600 Series.

Cure Parameters

PowerPrint Fluorescent Series cures when exposed to a single medium pressure mercury vapor lamp emitting output millijoules (mJ) and milliwatts (mW) of:

80-130 mJ/cm² @ 600+ mW/cm²

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, lower block resistance, reduced durability, and higher residual odor. "Overcuring" the ink may reduce the flexibility of the printed part and adhesion of subsequent ink layers.

To increase mJ levels, slow down the belt speed or scan speed. To increase mW levels, increase the wattage setting of the UV reactor. To optimize mJ and mW output, maintain the bulb and reflector, and ensure proper focus to the substrate.

These guidelines are representative of measurements taken using an EIT® UVICURE® Plus radiometer measuring the UVA bandwidth (320-390 nm). To obtain accurate mW readings with the UVICURE® Plus, reduce the belt speed to less than 40 ft/min.

Note: *Fluorescent colors fade with exposure to ultraviolet light. This includes outdoor exposure as well as UV reactor exposure. It is therefore recommended to adjust art so these colors are the final colors printed on any image.*

UV Screen Ink

Inter-Printing Inks

PowerPrint® Graphic Fluorescent Screen inks can be inter-printed with other Nazdar UV Screen inks, including:

- PowerPrint 1600 UV Ink Series
- PowerPrint Plus 1800 UV Ink Series
- PowerPrint Banner 1900 UV Ink Series

Refer to the Technical Data Sheet for the inter-printed ink to determine processing recommendations.

Common Performance Additives

The market specific performance properties of the PowerPrint Fluorescent Series 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:

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

Reducer: Use RE302 UV Reducer to reduce the viscosity of these inks. Add up to 10% by weight. Over reduction can reduce print definition, film thickness and adversely affect cure.

Adhesion Promoter: Use NB80 UV Adhesion Promoter to enhance adhesion to certain substrates. Add up to 5% by weight. Improved adhesion will be demonstrated within 24 hours, with full cross linking in 4-7 days. Ink mixed with NB80 UV Adhesion Promoter has a 4-8 hour pot life.

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

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.

This ink series is a one-part, 100% solids UV-curable screen printing ink and 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, 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.

Weathering / Outdoor Durability

PowerPrint® Fluorescent Screen ink colors fade quickly with exposure to UV light and are not recommended for outdoor exposure.

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.

Fluorescent Colors

UV Screen Ink

Nazdar PowerPrint® Fluorescent Ink Series



Cured ink has a satin finish. The fluorescent additives mixed into the ink have the tendency to settle; mixing is required prior to printing.

Fluorescent colors fade with exposure to UV light. This includes outdoor exposure as well as UV reactor exposure. It is therefore recommended to adjust art so that these colors are the final colors printed on any image.

Color Card Materials

The following is available screen printed sample literature representing PowerPrint Fluorescent Colors.

UV Color Card (CARDUV): shows the Fluorescent 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.

Fluorescent Colors

Item Number	Color
32510	Fluorescent Chartreuse
32520	Fluorescent Orange / Yellow
32530	Fluorescent Orange
32540	Fluorescent Orange / Red
32550	Fluorescent Red
32560	Fluorescent Cerise
32570	Fluorescent Pink
32580	Fluorescent Blue
32590	Fluorescent Green
32600	Fluorescent Magenta

Additives / Reducers

Item Number	Item Description
RE302	UV Reducer
NB80	UV Adhesion Promoter

Cleaners / Clean Up

Item Number	Item 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®.

Nazdar Ink Technologies Offices Worldwide

Nazdar Ink Technologies -World Headquarters
 8501 Hedge Lane Terrace
 Shawnee, KS 66227-3290 USA
 Toll Free US: 866-340-3579
 Tel: +1 913-422-1888
 Fax: +1 913-422-2296
 E-mail: NazdarOrders@nazdar.com
 Technical Support E-mail: InkAnswers@nazdar.com

Nazdar Limited – EMEA
 Barton Road, Heaton Mersey
 Stockport, England SK4 3EG
 Tel: + (44) 0-161-442-2111
 Fax: + (44) 0-161-442-2001
 UK Technical Service E-mail: technicalservicesuk@nazdar.com

Nazdar – Asia Pacific
 11 Changi North Street 1 #03-03/04
 Singapore 498823
 Tel: +65-63854611
 Fax: +65-65433690
 E-mail: aspac@nazdar.com

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