

NFX56 UV Magnetic Receptive UV Screen Ink can be used on various substrates to produce a surface coating that will attract a magnet. The ink deposit, printed surface area, and thickness of the magnet contribute to the level of attraction. NFX56 UV Magnetic Receptive UV Screen Ink is only suitable for flat substrates; folding, flexing, etc. may cause cracking in the ink layer. The ink itself is non-magnetic. Previously referenced as 676856PS Magnetic Receptive UV Screen Ink.

## Primary Substrates

### Substrates

- Rigid Styrene
- Polycarbonate
- Some Coated Papers

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

156-200 tpi (61-81 tpcm) monofilament polyester mesh for most

Coarser mesh counts and/or twill weave result in heavier ink deposit requiring 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 1,200 – 1,400 square feet (111 - 130 square meters) per gallon through a 156 mesh depending upon ink deposit.

### Printing

UV Magnetic Receptive Screen Ink is formulated to be press ready. Thoroughly mix the ink prior to printing. Improper mixing can lead to inconsistent color and ink performance.

Multiple printed layers may be needed to achieve desired magnetic receptive properties. Assure

previous ink layer is properly cured before printing the next layer.

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.

The ink can be affected by stray UV light. Be aware of skylights, windows and overhead lights curing the ink in the screen; light filters are recommended. Leaving a container uncovered may result in the ink's surface forming a "skin", caused by reaction with ambient lighting. Keep containers covered.

Nazdar does not recommend inter-mixing of UV Magnetic Receptive Screen Ink with other inks.

### Cure Parameters

For an ink deposit through a 156 mesh, UV Magnetic Receptive Screen Ink cures when exposed to a single medium pressure mercury vapor lamp emitting output millijoules (mJ) and milliwatts (mW) of:

130-180 mJ/cm<sup>2</sup> @ 600+ mW/cm<sup>2</sup>

Overprinting dark backgrounds will adversely affect the cure results. 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 blocking 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 scanning speed. To increase mW levels, increase the wattage setting of the UV reactor. To

UV Screen Ink

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, the belt speed or scanning speed should be 40 ft/min or less.

### Cleanup

Screen Wash (Prior to Reclaim): Use IMS203 Economy Graphic Screen Wash, or IMS207C Graphic Recirculating 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.

### Processing

Overprinting: UV Magnetic Receptive Screen Ink can be overprinted with Nazdar 1600 UV Screen Ink Series. Overprinting the magnetic receptive surface decreases magnetic attraction, please pretest.

Finishing: The ink deposit is very rigid. Care should be taken to prevent rolling, bending or folding. It is not recommended to die cut or guillotine cut through the ink surface. When guillotine cutting, stacks should be very short to prevent potential bending.

## 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. Cardstock scratches easily, so use magnification to determine if scratches are ink only or ink and top layer of substrate.
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.

Full adhesion characteristics at proper cure levels are demonstrated within 24 hours.

### Color Card Materials

The following is a list of available screen printed samples of the NFX56 UV Magnetic Receptive Screen Ink.

Magnetic Receptive UV Screen Ink (LIT0401): shows the UV Magnetic Receptive Ink printed on the back of offset printed graphics that are attracted to a magnetic background.

### Manufacturer's Product Offering

Based on information from our raw material suppliers, this ink product is formulated to contain less than 0.06% lead. If exact heavy metal content is required, independent lab analysis is recommended.

## Packaging / Availability

Contact your Nazdar distributor for product availability and offering.

### Standard Ink Item

Inventoried in one gallon containers.

Item Number	Color
<b>NFX56</b>	Magnetic Receptive
<i>(Formerly 676856PS Magnetic Receptive)</i>	

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## Cleaners / Clean Up

Item Number	Color
<b>IMS203</b>	Economy Graphic Screen Wash
<b>IMS207C</b>	Graphic Recirculating Wash
<b>IMS301</b>	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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