

Nazdar NSC61 IR Transmitting Black Solvent-Based Screen Ink

NSC61 IR Transmitting Black is formulated to adhere to transparent polycarbonate, pre-treated polyester and acrylic. The ink allows high transmission at wavelengths starting from 700 nanometers and longer and exhibits good opacity with low visible light transmission. Transmission efficiency may be affected by the ink layer and addition of additives to the ink; spectrometer measurements may vary. The NSC61 is compatible to inter-print with the 8400 Series solvent-based screen ink system. Thorough testing is necessary before any production run.

Substrates

Polycarbonate (PC)
Top coated / Print treated polyester (PET)
Acrylics (PMMA)

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

200-305 tpi (78-120 tpcm) monofilament polyester mesh for most applications.

Stencil

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

Squeegee

70-80 durometer polyurethane squeegee.

Coverage

Depending upon ink deposit, the estimated coverage per gallon: 1,200-1,800 square feet (111-167 square meters)
Reference www.nazdar.com/en-us/ColorStar for examples of coverage calculations.

Screen Printing

Standard items are formulated to be press ready. Thoroughly mix the ink prior to printing. Improper mixing can lead to inconsistent color and ink performance.

Add only enough ink to the screen to be able to print for 5-10 minutes. Add additional ink in small increments throughout the print run to maintain screen stability. 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 this ink series with other inks or series.

Drying / Curing Parameters

The following are starting point guidelines to determine temperature and times to achieve a crosslinked ink film. dryers set at temperatures of 150°F - 190°F (66°C - 88°C) will dry the ink in 30 to 40 seconds. Good air circulation is necessary to remove the vaporized solvents. Multiple layers of ink may require longer drying times than a single layer. Block resistance should be carefully tested prior to stacking printed pieces.

Adhesion Testing

- 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

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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.

Cleanup

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

Screen Wash (Prior to Reclaim): Use IMS201 Premium Graphic Screen Wash or IMS203 Economy Graphic Screen Wash

Press Wash (On Press): Use IMS301 Premium Graphic Press Wash

Ink Modifications

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.

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Example for additives: Ink at 100g with 8% of an additive is calculated as: 100g ink + 8g additive = 108g total

The recommended sequence for adding additives is: a) thinner and/or retarder first, then b) the catalyst or adhesion promoter last. The addition of any additive may affect transmission properties, Test thoroughly before production.

Reducer / Thinner

RE195 Thinner/Screen Wash: add up to 15%. RE195 may also be used to wash ink from the screen.

Retarder

Use RE196 Retarder or a combination of RE196 Retarder and RE195 Thinner/Screen Wash to slow the drying of this ink. Add up to 15% for one or a total of both additives

Adhesion Promoter

NB80 UV Adhesion Promoter:, add up to: 4%. Improved adhesion to some films. Ink mixed with NB80 UV Adhesion Promoter has a 4-8 hour pot life.

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.

Standard items useable for a period of at least **48 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 heavy metal content is required, independent lab analysis is recommended.

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Packaging / Availability

Contact your Nazdar distributor for product availability and offering.

| Item Type | Item Number | Item (or Color) Description |
|-----------------|-------------|-----------------------------|
| Standard Colors | NSC61 | IR Transmitting Black |
| Additives | RE195 | Thinner/Screen Wash |
| Additives | RE196 | Retarder |
| Additives | NB80 | Adhesion Promoter |
| Cleaners | IMS201 | Premium Graphic Screen Wash |
| Cleaners | IMS203 | Economy Graphic Screen Wash |
| Cleaners | 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®.

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