Technical Data Sheet

Nazdar NSC43 UV Lens Clear Screen Ink

NAZDAR INK TECHNOLOGIES

v 9 EN

Ref: v 9 EN

NSC43 UV Lens Clear Screen Ink is specifically formulated to print over textured polycarbonate and polyesters used as membrane overlays to create a clear window. NSC43 is designed for top or first surface printing and cures to a hard, mar-resistant finish.

Substrates

- Textured polycarbonate
- Some polyesters

Substrate recommendations are based on commonly available materials intended for the ink's specific market when the ink is 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

355 tpi (140tpcm) monofilament polyester mesh for most applications.

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

70-80 durometer polyurethane squeegee.

Coverage

Estimated 2,500 - 3,500 square feet (232 - 325square meters) per gallon depending upon ink deposit. Reference www.nazdar.com for examples of coverage calculations.

Printing

NSC43 requires power mixing prior to each use to ensure optimal printability. Manual mixing or shaking are not suitable mixing methods. Improper mixing can lead to inconsistent ink performance.

Pretest to determine optimum printing parameters for a particular set of ink, substrate, screen, press, and curing variables/conditions.

Do not inter-mix NSC43 with other inks.

Cure Parameters

UV Air Texture Screen Inks cure when exposed to a single medium pressure mercury vapor lamp emitting output millijoules (mJ) and milliwatts (mW) of:

200 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, reduced durability, and higher residual odor. "Overcuring" the ink may reduce the flexibility of the printed part.

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.

Common Performance Additives

The market specific performance properties of the NSC43 should be acceptable for most applications without the need for additives. When required, any additives should be thoroughly power 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:

100g ink + 8g additive = 108g total

Reducer: Use RE304 Reducer to reduce the viscosity of these inks. Add up to 10% by weight. Over reduction can 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.

UV Screen Ink

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 contaminating unused ink.

NSC43 supplied in 1 gallon (4 kilo) containers or smaller is useable for a period of at least 24 months from the date of manufacture. Ink packaged in 5 gallon or greater (20 kilo or greater) containers may have a significantly reduced shelf life. For more detail pertaining to the shelf life of Nazdar's ink products, contact Nazdar Technical Service at InkAnswers@nazdar.com or see contact listing at the end of this document.

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 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.

Full adhesion characteristics at proper cure levels are demonstrated within 4 hours.

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 Items

Standard ink items listed below are inventoried in 1-kilogram and gallon containers.

Item Number	Item
NSC43	UV Lens Clear

Additives / Reducers

Item Number	Item Description
RE304	Reducer

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®.

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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 3EE
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 6385 4611
E-mail: aspac@nazdar.com

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