

# Nazdar NSC17 & NSC18 A+ Chalk Board UV Screen Inks

NSC17 Clear and NSC18 Black A+ Chalk Board UV screen inks provide a matte surface that can be written on with chalk and erased.

## Substrates

- Styrene
- Rigid vinyl
- Pressure sensitive vinyl
- Coated Paper
- Coated card stock

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

156-195 tpi (45-77 tpcm) monofilament polyester mesh with a mesh opening of 22-38 um for most applications.

### Stencil

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

### Squeegee

70-90 durometer polyurethane squeegee.

### Printing

NSC17 and NSC18 are 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.

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.

### Cure Parameters

NSC17 and NSC18 will cure when exposed to a single medium pressure mercury vapor lamp emitting millijoules (mJ) and milliwatts (mW) of:  
110 - 150 mJ/cm<sup>2</sup> @ 600+ mW/cm<sup>2</sup> UVA

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<sup>®</sup> UVICURE<sup>®</sup> Plus radiometer measuring the UVA bandwidth (320-390 nm). To obtain accurate mW readings with the UVICURE<sup>®</sup> Plus, reduce the belt speed to less than 40 ft/min.

### Inter-printing Screen Inks

NSC17 Clear and NSC18 Black A+ Chalk Board inks are suitable to overprint the following UV screen ink series:

PowerPrint<sup>®</sup> 1600 UV Ink Series

PowerPrint<sup>®</sup> Plus1800 UV Ink Series

PowerPrint<sup>®</sup> Banner1900 UV Ink Series

4000 UV Ink Series

4200 UV Ink Series

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

Note: when inter-printing with any UV screen ink or digital ink, pre-test to determine suitable inter-

UV Screen Ink

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## UV Screen Inks



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printing adhesion and any finishing processing.  
Common

### 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 contaminating unused ink.

NSC17 and NSC18 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. Inks 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](mailto: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 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.

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

### 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

Contact your Nazdar distributor for product availability and offering.

### Ink Items

Ink items listed below are inventoried in gallon containers.

Item Number	Color
NSC17	A+ Chalk Board Clear
NSC18	A+ Chalk Board Black

### 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

UV Screen Ink

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## 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

### 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: [custserv@nazdar.com](mailto:custserv@nazdar.com)  
Technical Support E-mail: [InkAnswers@Nazdar.com](mailto:InkAnswers@Nazdar.com)

### Nazdar Limited – EMEA

Battersea Road, Heaton Mersey  
Stockport, England SK4 3EE  
Tel: + 44 (0)-161-442-2111  
Fax: + 44 (0)-161-442-2001  
EMEA Technical Service E-mail:  
[technicalservicesuk@nazdar.com](mailto:technicalservicesuk@nazdar.com)

### Nazdar – China

Room 17-04, Silver Centre  
1388, North Shan Xi Road  
Shanghai 200060 China  
Tel: +86-13818301261  
E-mail: [aspac@nazdar.com](mailto:aspac@nazdar.com)

### Nazdar – Asia Pacific

10, Changi South Street 3 #01-01  
Singapore 486147  
Tel: +65-65434920  
Fax: +65-65433690  
E-mail: [aspac@nazdar.com](mailto:aspac@nazdar.com)