



# NSC47, NSC48, NSC49, NSC50 UV AIR TEXTURE SCREEN INKS

## TECHNICAL DATA SHEET

UV Air Texture Screen Inks are designed to give a clear decorative texture effect on first surface polycarbonate and some pre-treated polyester, used for membrane overlay applications. Textures are available from very fine to very coarse (*See Packaging*).

NSC47, NSC48, NSC49 and NSC50 UV Air Texture screen inks may be inter-mixed with each other to achieve a desired texture. Mesh counts must be selected for the coarsest texture used in the mixture.

An inert (nitrogen) atmosphere curing unit is not necessary for all Nazdar texture clears designated as “UV Air Texture.”

**SUBSTRATES** Polycarbonate and some pre-treated polyester

## USER INFORMATION

*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. See full disclaimer at the end of the document.*

**MESH** 160 - 355 threads per inch (55 - 140 threads per centimeter) monofilament polyester mesh for most applications. See packaging page 3 for the range of mesh counts recommended for each ink.

**STENCIL** Solvent resistant, UV ink compatible direct emulsions and capillary films

**SQUEEGEE** 70-90 durometer polyurethane squeegee

**COVERAGE** 1500 - 3000 square feet (139 - 279 square meters) per gallon depending upon ink deposit

**PRINTING** UV Air Texture screen inks are formulated to be press ready. Thoroughly mix the ink prior to printing.  
Maintain ink temperature at 65°-90°F (18°-32°C) for optimum print and cure performance. Lower temperatures increase the ink viscosity, impairing both flow and cure. Elevated temperatures lower the ink viscosity, reducing print definition and film thickness.  
Pretest to determine optimum printing performance for a particular set of ink, substrate, screen, press, and curing variables/conditions.  
The ink can be affected by stray UV light in and around a printing facility. Be aware of skylights, windows and overhead lights curing the ink in the screen. Light filters are recommended.

### CURE PARAMETERS

UV Air Texture screen inks cure when exposed to a medium pressure mercury vapor lamp set at 300 watts per inch with at least 200 millijoules (mJ/cm<sup>2</sup>) and 800 milliwatts (mW/cm<sup>2</sup>) of UV energy.

These guidelines are intended only as a starting point for determining cure parameters, which must be determined under actual production conditions.

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 condition and focus to the substrate.

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

### ADDITIVES

Additives should be thoroughly mixed into the ink before each use. Prior to production, test any additive adjustment to the ink.

*Reducer:* Use RE301 Reducer to reduce the viscosity of the ink. Add up to 10% by weight. The addition of reducer may increase gloss and/or change texture effect.

### CLEAN UP

*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 tightly covered at temperatures between 65°-90°F (18°-32°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 UV Air Texture Material Safety Data Sheet for further instructions and warnings.

UV Air Textures are one-part, 100% solids UV-curable screen printing inks which do not contain N-vinyl-2-pyrrolidone (trade name V-Pyrol®).

### ADHESION TESTING

Even when recommended UV energy output levels are achieved, it is imperative to check adhesion on a **cooled down** print:

1. Touch of ink surface – the ink surface will be dry to touch.
2. Scratch surface – the ink surface will resist scratching.
3. Cross hatch tape test – 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, wait for 1 minute and rip off at a 180 degree angle. Ink should only come off in actual cut areas.

Full adhesion characteristics are demonstrated within 24 hours after cure.

## PRODUCT OFFERING



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## TECHNICAL DATA SHEET

### COLOR CARD MATERIALS

The following is a list of screen printed samples available.

UV Texture Clears Color Card: shows all standard UV Air Texture and Nitrogen Texture clears available.

NSC UV Air Texture Clears Color Card LIT0217: shows the UV Air Texture Clears only.

### PACKAGING

All items listed below are available in kilogram and gallon containers.

Stock Number	Description	Mesh Count
NSC47	UV Air Texture Very Fine	200 – 355 tpi (80 – 140 tpcm)
NSC48	UV Air Texture Medium	200 – 305 tpi (80 – 120 tpcm)
NSC49	UV Air Texture Coarse	200 – 260 tpi (80 - 100 tpcm)
NSC50	UV Air Texture Very Coarse	160 – 200 tpi (55 - 80 tpcm)

### PACKAGING

Additives/Reducers are available in liter and/or gallon containers. Cleaners are available in gallon, 5 gallon and 55 gallon containers.

Stock Number	Additives/Reducers	Stock Number	Cleaners
RE301	UV Reducer	IMS203	Economy Graphic Screen Wash
		IMS207C	Graphic Recirculating Wash
		IMS301	Premium Graphic Press Wash

*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®.*

Based on information from our raw material suppliers, these 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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