Technical Data Sheet

NFX53 UV Soft Feel Clear Screen Ink

(Formerly 60013919GM UV Soft Feel Clear)

v 3 EN

Ref: v 2 EN

NFX53 UV Soft Feel Clear is a matte overprint clear ink for providing a somewhat soft feel, touchable surface that resists scuffing. NFX53 UV Soft Feel Clear can also be used to print in selected areas to enhance the feel of a graphic image.

Substrates

- Rigid Vinyl
- 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

110 - 355 tpi (43 - 140 tpcm) monofilament polyester mesh for most applications.

Coarser mesh counts and/or twill weave result in heavier ink deposit and may require additional cure output.

Stencil

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

Squeegee

70-90 durometer polyurethane squeegee.

Printing

NFX53 UV Soft Feel Clear is formulated to be press ready. Thoroughly mix the ink prior to printing. Improper mixing can lead to inconsistent 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.

Nazdar does not recommend inter-mixing of NFX53 UV Soft Feel Clear with other inks.

Cure Parameters

NFX53 UV Soft Feel Clear cures when exposed to a single medium pressure mercury vapor lamp emitting output millijoules (mJ) and milliwatts (mW) of:

180-220 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, lower block resistance, reduced durability, and higher residual odor. "Overcuring" the ink may reduce the flexibility of the printed part.

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® 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 NFX53 UV Soft Feel Clear should be acceptable for most applications without the need for additives. When required, any additives should be thoroughly mixed before each use.

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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 RE302 UV Reducer to reduce the viscosity of these inks. Add up to 10% by weight. Over reduction can reduce print definition, film thickness and adversely affect cure.

Processing

Finishing: Finishing requirements are dependent on the combination of the underprint ink and the NFX53 UV Soft Feel Clear. All finishing processes should be qualified prior to full scale print production.

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.

NFX53 UV Soft Feel Clear supplied in 1 gallon containers or smaller are useable for a period of at least 24 months from the date of manufacture. To obtain the official shelf life letter, 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 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 24 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.

NFX53 UV Soft Feel Clear is packaged in gallon containers.

Additives / Reducers

RE302 UV Reducer is packaged in liter and gallon containers.

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Cleaners are packaged in gallon, 5 gallon, and 55 gallon containers.

Cleaners / Clean Up

Item Number	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 limted to the value of the product purchased from Nazdar®.

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