Nazdar VF Series Flat Vinyl Screen Ink

NAZDAR
INK TECHNOLOGIES

VF Series inks are formulated to have excellent adhesion to both rigid and flexible vinyl and some vinyl coated materials. The inks have excellent printability, opacity, fast drying and non - blocking characteristics and are recommended only for interior applications.

Substrates

- Flexible vinyl
- Some vinyl coated materials

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

150 – 280 tpi (60 – 110 tpcm) monofilament polyester mesh for most applications.

Stencil

Use direct emulsions and capillary films which are solvent resistant.

Squeegee

70 - 80 durometer polyurethane squeegee.

Coverage

Estimated 1000 - 1500 square feet (93 - 139 square meters) per gallon depending upon ink deposit. Reference www.nazdar.com for examples of coverage calculations.

Printing

VF Series Inks must be thinned approximately 10% by weight prior to printing. 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 drying 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 drying variables/conditions.

Nazdar does not recommend inter-mixing of VF Series with other inks besides the VF Series.

All colors except VF111 Black may be heat sealed. VF121 Non Arcing Black is used for heat sealing.

Drying

VF Series dries by solvent evaporation and jet dries at temperatures of 140 - 160°F (53 - 71°C). Good air circulation is necessary to remove the vaporized solvents. Multiple layers of ink may require longer drying times than a single layer.

Clears / Varnishes

Mixing Clear: Use VF170 Mixing Clear to reduce the density of colors or as a clear base for specialty additives such as Metallics.

Extender Clear: Use VF175 Extender Clear to reduce color strength without affecting viscosity of the ink.

Common Performance Additives

The market specific performance properties of the VF Series should be acceptable for most applications without the need for additives. When required, any additives should be thoroughly mixed into the ink 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 VF190 Reducer to reduce the viscosity of these inks. Add up to 15% by weight.

Retarder: Use VF192 Retarder to improve the screen stability during hot climate conditions or for slower drying. Add up to 15% by weight.

Sharp Printing Compound: Use VF178 Sharp Printing Compound for printing fine detail, halftones and on textured surfaces.

Solvent-Based Screen Ink

Technical Data Sheet
Nazdar VF Series Flat Vinyl Screen Ink

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v 7 EN

Ref: v 6 EN

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°-90°F (18°-32°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.

Standard VF Series items are useable for a period of at least 48 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

All personnel mixing and handling these products must wear gloves and eye protection. Clean up spills immediately. If ink does come in contact with skin, wipe ink off with a clean, dry, absorbent cloth (do not use solvent or thinner). 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).

Adhesion Testing

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.

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.

Standard Printing Colors

Standard Printing Colors have excellent opacity and flow characteristics.

"LF" Item Numbers

Colors with an item number containing "LF" are lead-free alternatives that replaced a lead containing color. All Nazdar manufactured inks are lead-free.

Special Effect Pigments

When inks are to be printed with a special effect color, all ink layers must be evaluated for intercoat adhesion before proceeding with the production run. Pigments may settle in the container; prior to printing, thoroughly mix the ink.

The following special effect pigments may be added to VF Series. Contact Nazdar for the item number(s) and availability of special effect products. Technical Data Sheets for each of the following special effect pigments can be found at www.nazdar.com.

Metallic Silver (aluminum): Add up to 8% by weight.

Metallic Gold (bronze): Add up to 15% by weight.

Chemical reactions in metallic inks may result in viscosity, color and printability changes over time; due to this, mix only enough metallic ink to be used the same day.

Pearlescent / Interference: Add up to 20% by weight.

Multi-Chromatic: Add up to 10% by weight.

Phosphorescent: Add up to 30% by weight.

Color Card Materials

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The following is a list of available screen printed samples of the VF Series.

Conventional Color Card (CARD375): shows the Standard Printing Colors.

Special Effects Color Card (CARDSPL): shows Metallic, Pearlescent, Interference, and Multi-Chromatic effects mixed with clear

Packaging / Availability

Contact your Nazdar distributor for product availability and offering.

Standard Ink Items

Standard ink items listed below are inventoried in quart and gallon containers.

Standard Printing Colors

Item Number	Color
VFLF103	Brilliant Red
VFLF104	Bright Red
VF111	Black
VF112	White
VF122	Opaque White
VFLF124	Orange
VFLF130	Primrose Yellow
VFLF132	Lemon Yellow
VFLF134	Medium Yellow
VFLF146	Cyanine Green
VF159	Permanent Blue
VF422	Reflex Blue
VF440	Process Blue
VF170	Clear
VF175	Extender Clear

Non-Standard Ink Items

Non-Standard ink items listed below are special order, non-inventoried colors which may require additional lead time. These items are available in gallon containers.

Printing Colors

Item Number	Color
VF106	Carmine Red
VF114	Brown
VF121	Non Arcing Black
VF152	Light Blue
VF156	Brilliant Ultra Blue
VF162	Purple
VF164	Cerise
VF410	Yellow

VF411	Warm Red
VF417	Rubine Red
VF433	Purple
VF178	Sharp Printing Compound

Additives / Thinners

Item Number	Description
VF190	Thinner
VF192	Retarder

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 limited to the value of the product purchased from Nazdar®.

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