Nazdar PA / Poly-All Series Screen Ink

PA Series Poly-All Screen Inks has been designed specifically for screen printing on untreated polypropylene. Its unique formulation makes pretreatment such as flaming or surface coating unnecessary. Poly-All performs satisfactorily on most polypropylene surface; however, since there is considerable variation in the formulation of substrate materials, the user must always pretest the adhesion and product resistance of the ink to the specific substrate prior to a production run. PA Series inks exhibit a semi-gloss finish. When thoroughly dried, PA Series ink has very good flexibility, and it has proven successful in some pad printing applications.

Substrates

- Untreated polypropylene

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

230-305 tpi (90-120 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 1,200-2,500 square feet (111 - 232 square meters) per gallon depending upon ink deposit. Reference www.nazdar.com for examples of coverage calculations.

Printing

The PA Series ink may be thinned with PA7 Thinner. 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 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.

Nazdar does not recommend inter-mixing of PA Series with other inks.

Drying / Curing Parameters

PA Series air dries in 20 minutes or may be force dried in 15-25 seconds at temperatures from 90°F to 150°F (32°C to 66°C). Poly-All should "age" a minimum of 72 hours for maximum adhesion.

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 /Metallic Mixing Clear: Use PA01 Clear to reduce the density of colors or as a clear base for specialty additives such as Metallics.

Common Performance Additives

Any additives should be thoroughly 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 PA7 Thinner to reduce the viscosity of these inks. Add up to 15% by weight.

Retarder: To improve on screen stability during hot climate conditions or for slower drying, a blend of PA7 Thinner (not more than 15% by weight) and PA8 Retarder (add up to 5% by weight) may be added to the ink.

Solvent-Based Screen Ink

Nazdar PA / Poly-All Series Screen Ink

Leveling Agent: Use FP460 Flow Promoter to reduce pinholes/air bubbles present in the printed ink film. Add up to 3% by weight.

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.

Standard PA 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 Material Safety Data Sheet (MSDS) for further instructions and warnings.

For assistance on a wide range of important regulatory issues, consult the following Regulatory Compliance Department link at www.nazdar.com/health_safety.asp 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.

Mixing Colors

The Mixing Colors are recommended for use in color matching. The higher pigment concentration of these colors provides stronger color saturation.

Special Effect Pigments

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

The following special effect pigments may be added to PA 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 40% by weight.

Fluorescents: Add up to 25% by weight. Fluorescent colors fade quickly with exposure to ultraviolet light.

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Packaging / Availability

Contact your Nazdar distributor for product availability and offering.

Standard Ink Items

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

Printing Colors

Item Number	Printing Color
PA01	Clear
PA10	White
PA11	Extra Opaque White
PA21	Yellow
PA26	Orange
PA30	Emerald Green
PA43	Royal Blue
PA46	Permanent Blue
PA49	Purple
PA52	Bright Red
PA53	Deep Red
PA54	Maroon
PA60	Brown
PA70	Black

Mixing Colors

Item Number	Mixing Color
PA310	Green
PA440	Process Blue
PA450	Reflex Blue
PA500	Warm Red
PA510	Rubine Red
PA570	Rhodamine Red
PA580	Magenta

Additives / Reducers

Item Number	Additives / Reducers
PA7	Thinner
PA8	Retarder
FP460	Flow Promoter

Cleaners / Clean Up

Item Number	Cleaners / Clean Up
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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