Technical Data Sheet

Nazdar PowerPrint 32500's® & CoroPlus® 32800's® Fluorescent Ink Series

Nazdars PowerPrint® 32500's® Fluorescent and CoroPlus® 32800's® Fluorescent Series UV Screen Inks are graphic POP inks that provides stable, pre-mixed fluorescent colors to be used for indoor graphics advertising applications.

Substrates

PowerPrint® 32500's®
Styrene (PS)
Rigid vinyl (PVC)
Vinyl (PVC)

Substrate Material(s) listed below may be Limited in Adhesion *(testing highly recommended for each print run)*
Acrylics (PMMA)
Coated paper / Coated cardstock

CoroPlus® 32800's®
Treated fluted/corrugated polypropylene (PP)

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.

Mesh
305-355 tpi (120-140 tpcm) monofilament polyester mesh.
Coarser mesh counts and/or twill weave result in heavier ink deposit requiring additional cure output.

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

Squeegee
70-90 durometer polyurethane squeegee.

Coverage
Depending upon ink deposit, the estimated coverage per gallon: 2,300 – 3,500 square feet (215 - 325 square meters)
Reference www.nazdar.com/en-us/ColorStar for examples of coverage calculations.

Screen Printing
Standard items 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.

Cure Parameters
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.

Mercury Vapor UV Curing: Standard ink cures when exposed to a single medium pressure mercury vapor lamp emitting output millijoules (mJ) and milliwatts (mW) of:
100-160 mJ/cm² @ 600+ mW/cm²

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 mJ readings with the UVICURE® Plus, reduce the belt speed to less than 40 ft/min.

Note: Fluorescent colors fade with exposure to ultraviolet light. This includes outdoor exposure as well as UV reactor exposure. It is therefore recommended to adjust art so these colors are the final colors printed on any image.

Processing
Inter-Mixing Inks:
Nazdar does not recommend inter-mixing of PowerPrint® 32500's Series with other inksbesides the PowerPrint® 32500's Series and PowerPrint® 1600 Series.
Nazdar does not recommend inter-mixing of CoroPlus® 32800's Series with other inks besides the CoroPlus® 32800's Series and Nazdar's 4200Series.

Inter-Printable
PowerPrint® 32500's® Series inks can be interprinted with other Nazdar UV Screen inks, including:
Nazdar 1600 UV Ink Series
Nazdar 1800 UV Ink Series
Nazdar 1900 UV Ink Series

CoroPlus® 32800's® Series inks can be interprinted with other Nazdar UV Screen inks, including:
Nazdar 1800 UV Ink Series
Nazdar 4200 UV Ink Series

Refer to the inter-printed ink's Technical Data Sheet for processing recommendations.

Adhesion Testing
When recommended UV energy output levels are achieved, checking the degree of cure on a **cooled down** print is imperative:
- Touch of ink surface – the ink surface should be smooth.
- Thumb twist – the ink surface should not mar or smudge.
- Scratch surface – the ink surface should resist scratching.
- 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.

Cleanup
For screen cleaning, similar products to those listed below may be used.

Screen Wash (Prior to Reclaim): Use IMS201 Premium Graphic Screen Wash or IMS203 Economy Graphic Screen Wash
Press Wash (On Press): Use 2537 Screen Wash or 2738 Heavy Duty Screen Wash.

Ink Modifications

Additives
The market specific performance properties of this ink series / ink item should be acceptable for most applications without the need for additives. When required, 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.

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Example for additives: Ink at 100g with 8% of an additive is calculated as: 100g ink + 8g additive = 108g total

Reducer / Thinner
Use the following item(s) to reduce the viscosity of these inks. Over reduction can reduce print definition, film thickness and adversely affect cure.

PowerPrint® 32500's inks: RE302 UV Reducer, add up to 10%.
CoroPlus® 32800's inks: RE312 UV Reducer, add up to 10%.
Over reduction can reduce print definition, film thickness and adversely affect cure.

Adhesion Promoter
Use the following item(s) to enhance adhesion.
NB80 UV Adhesion Promoter: add up to: 5%. Improved adhesion will be demonstrated within 8-24 hours, with full crosslinking in 4-7 days. Ink mixed with NB80 UV Adhesion Promoter has a 4-8 hour pot life. NB80 is sensitive to humidity and moisture; clean the lid and container thoroughly after each use to prevent fusing of the container.

General Information
Handling
Refer to the SDS for recommendations on handling.
Wear gloves and barrier cream to prevent direct skin contact. Safety glasses are suggested in areas where ink may be splashed. If product 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.
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).

Weathering / Outdoor Durability
Items printed with this ink not recommended for outdoor use.

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.

Standard items supplied in 1-gallon (4/5 kilo) containers or smaller. Useable for a period of at least **24 months** from the date of manufacture.

Shelf life above applies to the standard ink items listed on this TDS. To obtain the shelf life for special inks and additives, contact Nazdar Customer Service or Nazdar Technical Service. See contact listing at the end of this document.

Note: PowerPrint® 32500's or CoroPlus® 32800's colors mixed with 1600 or 4200 Series colors have a shelf life of **4 to 6 months**.

Standard Color Range
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.

Flourescent Colors Product Specific
Cured ink has a satin finish. The fluorescent additives mixed into the ink have the tendency to settle; mixing is required prior to printing.colors fade with exposure to UV light. This includes outdoor exposure as well as UV reactor exposure. It is therefore recommended to adjust art so that these colors are the final colors printed on any image.

Packaging / Availability
Contact your Nazdar distributor for product availability and offering.

Item Type	Item Number	Item (or Color) Description
PowerPrint® 32500's	32510	Fluorescent Chartreuse
PowerPrint® 32500's	32530	Fluorescent Orange
PowerPrint® 32500's	32540	Fluorescent Orange / Red
PowerPrint® 32500's	32550	Fluorescent Red
PowerPrint® 32500's	32560	Fluorescent Cerise

PowerPrint® 32500's	32570	Fluorescent Pink
PowerPrint® 32500's	32580	Fluorescent Blue
PowerPrint® 32500's	32590	Fluorescent Green
PowerPrint® 32500's	32600	Fluorescent Magenta
CoroPlus® 32800's	32810	Fluorescent Chartreuse
CoroPlus® 32800's	32830	Fluorescent Orange
CoroPlus® 32800's	32840	Fluorescent Orange/Red
CoroPlus® 32800's	32850	Fluorescent Red
CoroPlus® 32800's	32860	Fluorescent Cerise
CoroPlus® 32800's	32870	Fluorescent Pink
CoroPlus® 32800's	32880	Fluorescent Blue
CoroPlus® 32800's	32890	Fluorescent Green
CoroPlus® 32800's	32900	Fluorescent Magenta
Additives	RE302	UV Reducer
Additives	RE312	UV Reducer
Additives	NB80	UV Adhesion Promoter
Cleaners	IMS201	Premium Graphic Screen Wash
Cleaners	IMS203	Economy Graphic Screen Wash
Cleaners	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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