VERSACON® CLASSIC V5000 SERIES TWO-PART CONTAINER SCREEN INK

TECHNICAL DATA SHEET

Versacon® Classic V5000 Series Two-Part Container solvent-based ink has been formulated for the decoration of treated polyethylene and treated polypropylene containers.

The V5000 Series exhibits excellent resistance to a wide range of solvents, chemicals and products normally packaged in "poly" containers. Versacon® Classic V5000 Series is supplied as a fast drying, two part system, requiring the addition of catalyst. Do not use un-catalyzed.

SUBSTRATES	Treated polyethylene and polypropylene containers

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 to the document.

MESH	200-355 threads per inch (80-140 threads per centimeter) monofilament polyester mesh for most applications
STENCIL	Solvent resistant direct emulsions and capillary films
SQUEEGEE	70-80 durometer polyurethane squeegee
COVERAGE	1200-3000 square feet per gallon depending upon ink deposit
PRINTING	*Do not use Versacon® Classic V5000 Series un-catalyzed*. Add any of the Catalysts listed below from 3% to 10% by weight Versacon® Classic V5000 ink. More Catalyst will result in faster cure, shorter pot life and thinner viscosity ink. Less Catalyst will result in slower cure, longer pot life and thicker viscosity ink. The amount of Catalyst has little or no effect on "tack free" time or final chemical resistance and adhesion properties. Catalyst must be added to the V5000 Series inks prior to printing. Cure speed can be optimized for particular print jobs by choosing among the available catalysts. Use of any of the listed catalysts results in excellent adhesion and chemical resistance. V5070 Catalyst – fastest cure and chemical resistance Best for print jobs that require high chemical resistance and adhesion very soon after printing/drying. Pot life of catalyzed ink with 10% V5070 is approximately 2-4 days in a tightly sealed container. V5072 Catalyst – slower cure speed, maximum pot life Best for print jobs where immediate chemical resistance and adhesion are not critical. Pot life of catalyzed ink with 10% V5072 is several months in a tightly sealed container. Versacon® Classic V5000 Series ink may be thinned with RE185 Thinner or RE181 Retarder

PRINTING CONT'D

prior to use. 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 inks prior to printing.

Maintain ink temperature at 65°-90°F (18°-32°C) for optimum print drying performance. Lower temperatures increase the ink viscosity, impairing both flow and drying. Elevated temperatures lower the ink viscosity, reducing print definition, film thickness and opacity.

Pretest to determine optimum printing performance for a particular set of ink, substrate, screen, press, and drying variables/conditions.

DRYING/ CURING

Versacon® Classic V5000 Series will air dry to touch in 8-15 minutes depending on the ambient conditions and screen mesh used. For best results, forced drying at temperatures of 90°F - 180°F (32°C - 83°C) is recommended. Good air flow at proper temperature is the key to accelerating dry cycles to 30-40 seconds. 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 V5026 Mixing Clear to reduce the density of colors or as a clear base for specialty additives such as aluminum metallic powders.

Gold or bronze metallic powders are not recommended to be mixed with the V5026 Clear or other V5000 inks. The addition of gold or bronze powders inhibits cure and affects chemical resistance.

ADDITIVES

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

Reducer: Use RE185 Thinner to reduce the viscosity of these inks. Add up to 15% by weight.

Retarder: Use RE181 Retarder to improve on-screen stability in hot conditions. Add up to 15% by weight. The addition of retarder will extend drying time.

CARE53 Gel Retarder may be added to improve on-screen stability without reducing viscosity. Add up to 5% by weight. The addition of retarder will extend drying time.

SIPI414 Thickening Powder may be added to increase viscosity. The addition of SIPI414 may affect printability and lower the gloss of the ink film.

CLEAN UP

Screen Wash (Prior to Reclaim): Use IMS201 Premium Graphic Screen 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

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 Versacon® Classic V5000 Series Material Safety Data Sheet for further instructions and warnings. Refer to the Material Safety Data Sheets for each catalyst: V5070 and V5072 for health and safety information regarding these raw materials.

ADHESION TESTING

1. Touch the ink surface – the ink will be smooth and slick.
2. Scratch surface – the ink 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.

PRODUCT OFFERING

STANDARD PRINTING COLORS

The Standard Printing Colors have excellent opacity and flow characteristics.

PANTONE MATCHING SYSTEM® BASE COLORS

Pantone Matching System® Base Colors are used to simulate the Pantone® Color Formulation Guide. These inks can be used in matches to achieve Pantone® color simulations, or let down with mixing clear. ColorStar® Color Management System software provides blends formulations using Pantone Matching System® Base Colors. These blend formulations are also available at www.nazdar.com.

METALLIC COLORS

Three standard metallic colors are available: V50185 Gold, V50186 Copper and V50187 Silver. Use 305 threads per inch mesh (120 threads per cm) or lower when printing these metallic colors.

SPECIAL ADDITIVES

When inks are to be printed over a special effect color, the overprinting ink(s) must be evaluated for intercoat adhesion before proceeding with the production run.

The following special effect pigments may be added to the V5000 Series inks. These pigments are available in 1-pound containers. Contact Nazdar for the item number(s) and availability of each special effect product.

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

Mix only enough metallic ink to be used the same day. Chemical reactions in metallic inks may result in viscosity, color and printability changes over time. The use of metallic powders in the ink may reduce chemical resistance.

Pearlescent / Interference Pigments: add up to 20% by weight.

Multi-Chromatic Pigments: add up to 10% by weight.

See the Pearlescent, Interference, and Multi-Chromatic Technical Data Sheets for more information.

Phosphorescents: Add up to 20% by weight.

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

COLOR CARD MATERIALS

The following is a list of screen printed samples available.

Conventional Color Card: shows the Standard Printing Colors and Pantone Matching System® Base Colors.

Metallic Colors Color Card: shows the three standard metallic colors V50185 Gold, V50186 Copper and V50187 Silver.

Special Effects Color Card: shows Metallic, Pearlescent, Interference, and Multi-Chromatic pigments mixed with clear.

PACKAGING All items listed below are available in 1-kilogram and 1-gallon containers.

Stock Number	Standard Printing Colors
V5010	Primrose Yellow
V5012	Medium Yellow
V5019	Fire Red
V5052	Super Opaque Black
V5075	Super Opaque White
V5078	High Intensity White
V5079	High Intensity Black
V5026	Mixing Clear
	Metallic Colors
V50185	Gold
V50186	Copper
V50187	Silver

Stock Number	Pantone Matching System® Base Colors
V50358	Tinting White
V50359	Tinting Black
V50360	Orange
V50361	Yellow
V50362	Warm Red
V50363	Rubine Red
V50364	Rhodamine Red
V50365	Purple
V50366	Violet
V50367	Reflex Blue
V50368	Process Blue
V50369	Green

PACKAGING Catalysts are available in 1-liter containers. Thinner and Retarders are available in 1-gallon containers. Cleaners are available in 1-gallon, 5-gallon and 55-gallon drum containers.

Stock Number	Additives/Reducers
V5070	Catalyst
V5072	Catalyst
RE181	Retarder
RE185	Thinner
CARE53	Gel Retarder
SIPE414	Thickening Powder (sold by pound)

Stock Number	Clean Up
IMS201	Premium Graphic Screen Wash
IMS301	Premium Graphic Press Wash

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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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