

Versacon[®] Classic 5100 Series Screen Ink is a solvent-based ink system for container printing and exhibits adhesion to various plastics, glass and some metals. The 5100 Series exhibits excellent resistance to a wide range of solvents and chemicals used in cosmetics, personal care and household cleaning applications. As a high gloss, fast drying, single part system, the 5100 Series exhibits good adhesion immediately upon drying, while final properties will be achieved in 5-7 days.

SUBSTRATES

Treated polyethylene and polypropylene, glass and some metals

Note: Due to variations in the type and manufacture of plastics, glass and metals, pre-testing must be done prior to any production run. Adhesion to the substrate does not guarantee satisfactory results with other end-use specifications.

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 of the document.

MESH

230-355 threads per inch (90-140 threads per centimeter) monofilament polyester mesh for most applications

STENCIL

Solvent resistant direct emulsions and capillary films

SQUEEGEE

70-80 durometer polyurethane squeegee

COVERAGE

1,200-3,000 square feet (110 – 275 square meters) per gallon depending upon ink deposit

PRINTING

The 5100 Series ink may be thinned with RE212 Thinner or RE185 Thinner (see ADDITIVES) prior to use. To maintain on-screen stability, add small amounts of ink throughout the print run. Thoroughly mix the ink prior to printing.

Plastic substrates must have a minimum surface energy level of 48 dynes/cm for optimum ink flow and adhesion.

Maintain ink temperature at 65°F - 90°F (18°C - 32°C). 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

The 5100 Series should air dry to touch in 8-15 minutes depending on the ambient conditions and screen mesh used. For best results, force 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 and is necessary to remove the vaporized solvents. Multiple layers of ink may require longer drying times than a single layer.

**CLEAR/
VARNISHES**

Mixing Clear / Metallic Mixing Clear: Use 5126 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 5126 Mixing Clear or other 5100 inks. See the Special Effects section.

ADDITIVES

All additives should be thoroughly mixed into the ink before each use. The addition of additives, regardless of amount, may shorten the pot life of the mixture. The pot life of the mixture depends not only on the type and amount of additive but also on the processing environment.

In some cases, additives may hinder overall performance. Inter-coat adhesion between colors that include additives must be thoroughly qualified prior to full scale production.

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

Use RE212 Thinner to reduce viscosity, optimize on-screen stability and printability, enhance cure and chemical resistance. Add up to 15% by weight.

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

Flow Agent: CARE22 Flow Agent may be added up to ½% by weight to help reduce pinholes or orange peel appearance.

Catalyst: V5070 Catalyst provides fast cure and chemical resistance. It is ideal for print jobs that require high chemical resistance and adhesion very soon after printing/drying. Pot life of extra catalyzed ink with 10% V5070 is approximately 1-2 days in a tightly sealed container. Add up to 10% by weight.

Thickener: SIPI414 Thickening Powder may be added to increase viscosity. The addition of SIPI414 may affect printability and lower the gloss of the ink film. Add starting at ½% by weight. The addition of SIPI414 requires power mixing of the ink.

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 immediately.

Consult the 5100 Series Material Safety Data Sheet for further instructions and warnings.

ADHESION TESTING

1. Scratch surface – the ink will resist scratching.
2. 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.

PANTONE MATCHING SYSTEM® BASE COLORS

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

SINGLE PIGMENT TONERS

The Single Pigment Toners may be used directly from the container or in color matches.

SPECIAL EFFECTS

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 5100 Series inks. These pigments are available in 1-pound containers. Contact Nazdar® for the item number(s) and availability of each special effect product. For each item, see the Technical Data Sheet for more information.

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.

Gold or bronze metallic: Gold or bronze metallic powders are not recommended to be mixed with the 5126 Mixing Clear or other 5100 inks. The addition of gold or bronze powders inhibits cure and affects chemical resistance.

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

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

Phosphorescent: add up to 20% by weight.

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

COLOR CARD MATERIALS

The following is a list of screen printed samples available.

Conventional Color Card (CARD375): shows the Standard Printing Colors, and Pantone Matching System® Base Colors.

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

PACKAGING

All items listed below are available in one kilogram and gallon containers.

Item Number	Standard Printing Colors	Item Number	Standard Printing Colors
5110	Primrose Yellow	5126	Mixing Clear
5112	Medium Yellow	5152	Super Opaque Black
5119	Fire Red	5175	Super Opaque White
5120	Brilliant Orange		

Item Number	Single Pigment Toners	Item Number	Pantone Matching System [®] Base Colors
5182	Carmin Toner	51358	Tinting White
5183	Magenta Toner	51359	Tinting Black
5184	Maroon Toner	51360	Orange
5185	Green Toner	51361	Yellow
5186	Blue Toner (GS)	51362	Warm Red
5187	Blue Toner (RS)	51363	Rubine Red
5188	Violet Toner	51364	Rhodamine Red
		51365	Purple
Item Number	Metallic Effect Colors	51366	Violet
51185	Gold	51367	Reflex Blue
51186	Copper	51368	Process Blue
51187	Silver	51369	Green

PACKAGING

Additives are available in quart and/or gallon containers unless noted.
Cleaners are available in 1-gallon, 5-gallon and 55-gallon containers.

Item Number	Additives	Item Number	Clean Up
RE212	Thinner (liters only)	IMS201	Premium Graphic Screen Wash
RE185	Thinner	IMS301	Premium Graphic Press Wash
CARE22	Flow Agent		
CARE53	Gel Retarder		
SIPI414	Thickening Powder (pounds only)		
V5070	Catalyst (liters only)		

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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