

Versacon[®] Classic 5100 Series Screen Ink is a solvent-based ink system which 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. 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.

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.

SUBSTRATES Treated polyethylene and polypropylene, glass and some metals

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 1200-3000 square feet 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 inks 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 will 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. Good air circulation 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. 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. 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.

Thinner/Retarder:

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

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

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 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:

If enhanced chemical resistance is needed the following may be used:

V5070 Catalyst provides fastest cure and chemical resistance. Best 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.

V5072 Catalyst provides slower cure speed, maximum pot life. Best for print jobs where immediate chemical resistance and adhesion are not critical. Pot life of extra catalyzed ink with 10% V5072 is several 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.

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 in matches to achieve Pantone[®] color simulations, 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.

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.

Pearlescents / 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 visible and 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.

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

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

Stock Number	Standard Printing Colors	Stock Number	Pantone Matching System [®] Base Colors
5110	Primrose Yellow	51358	Tinting White
5112	Medium Yellow	51359	Tinting Black
5119	Fire Red	51360	Orange
5120	Brilliant Orange	51361	Yellow
5126	Mixing Clear	51362	Warm Red
5152	Super Opaque Black	51363	Rubine Red
5175	Super Opaque White	51364	Rhodamine Red
		51365	Purple
	Single Pigment Toners	51366	Violet
5182	Carmine Toner	51367	Reflex Blue
5183	Magenta Toner	51368	Process Blue
5184	Maroon Toner	51369	Green
5185	Green Toner		Metallic Colors
5186	Blue Toner (GS)	51185	Gold
5187	Blue Toner (RS)	51186	Copper
5188	Violet Toner	51187	Silver

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

Stock Number	Additives	Stock Number	Additives
RE212	Thinner (liters only)	V5070	Catalyst (liters only)
RE185	Thinner	V5072	Catalyst (liters only)
CARE22	Flow Agent		Clean Up
CARE53	Gel Retarder	IMS201	Premium Graphic Screen Wash
SIPI414	Thickening Powder (pounds only)	IMS301	Premium Graphic Press Wash

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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