

SCF Scratch Off inks are specially formulated to be printed on lottery tickets and games that are typically given away by retail outlets. These inks form a very opaque film that hides the “prize” until the ink is removed by scratching with a fingernail or coin. The card stock should be coated with a UV curable screen print clear such as the PSLC 294 UV Litho Clear to seal the cardstock prior to the application of SCF Scratch Off inks. An under-print of a clear provides the best adhesion and scratch-off properties of the SCF Scratch Off inks.

Substrates

- Card Stock

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

110-195 tpi (43-77 tpcm) monofilament polyester mesh for most applications.

Stencil

Use direct emulsions and capillary films which are solvent resistant.

Squeegee

60-80 durometer polyurethane squeegee.

Coverage

Estimated 600 – 1,000 square feet (55 - 93 square meters) per gallon depending upon ink deposit. Reference www.nazdar.com for examples of coverage calculations.

Printing

SCF Scratch Off Inks are formulated to be press ready. 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. A heavier ink deposit will provide increased opacity. 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 SCF Scratch Off Inks with other inks.

Drying / Curing Parameters

SCF Scratch Off Inks dry by solvent evaporation in 10 to 20 minutes depending on ambient conditions. Force dry in seconds at temperatures of 90 F° to 160 F° (32 C° to 71 C°). Use of excessive heat may cause ink not to scratch off. Good air circulation is necessary to remove the vaporized solvents.

Clears / Varnishes

Clear Coat: Print PSLC 294 UV Litho Clear beneath the SCF Scratch Off inks to seal the card stock to provide a surface that can be scratched without damaging the underlying graphic. For best results, print PSLC 294 UV Litho Clear through a 355-380 tpi (140-150tpcm) mesh and UV expose to a single medium pressure mercury vapor lamp emitting output of 140-160 mJ (millijoules) /600+ mW (milliwatts).

Prior to a full production run, it is the responsibility of the printer:

- To test the adhesion characteristics on the card stock with PSLC294 UV Litho Clear.
- To thoroughly evaluate the clear\varnish chosen in combination with the SCF Scratch Off inks for ease of scratch off test a) within 24 hours and b) over the expected life time for the printed pieces.

Common Performance Additives

The market specific performance properties of the SCF Scratch Off Inks 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.

Thinner: Use 5500 Reducer to reduce the viscosity of these inks. Add up to 10% 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

Store closed containers at temperatures between 65°-78°F (18°-25°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 SCF Scratch Off Inks Material Safety Data Sheets for further instructions and warnings.

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.

Color Card Materials

The following is a list of available screen printed samples of the SCF Scratch Off Inks.

SCF Scratch Off Ink Sample Print (LIT0312): shows the SCF Scratch off inks printed over PSLC294 UV Litho Clear on a litho / offset printed coated card stock.

Packaging / Availability

Contact your Nazdar distributor for product availability and offering.

Standard Ink Items

Standard ink items listed below are inventoried in gallon containers.

Printing Colors

Item Number	Color
SCF35	Scratch Off Silver

UV Litho Clear

Item Number	Color
PSLC294	UV Litho Clear

Additives / Reducers

Item Number	Color
5500	Thinner

Cleaners / Clean Up

Item Number	Color
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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Solvent-Based Screen Ink