



# NoriCure<sup>®</sup> CCI LED

UV Curing Screen Printing Ink for Lamination of  
ID and Credit Cards

## Area of Application

**NoriCure<sup>®</sup> CCI LED is an UV curing screen printing ink suitable for printing on PVC and PETG core films used in card manufacturing.**

## Lacquer NoriCure<sup>®</sup> CCI LED 093 for Lamination

NoriCure<sup>®</sup> CCI LED 093 has good lamination properties with uncoated and coated **PVC overlay films** (e.g. Pentacard-CC-M278/01-51/8800-494-**SB6**-100 µm) at a temperature of 140 °C (285 °F) and good peel strength.

## Effect Pigment Colors and Color Shades

The silver and gold color shades can be prepared by mixing NoriCure<sup>®</sup> CCI LED with appropriate effect pigments or mixtures of effect pigments.  
For effect inks and colored inks the use of coated PVC overlay films (e.g. Pentacard-CC-M278/01-51/8800-494-**SB6**-100 µm) is highly recommended for achieving good lamination properties and high peel strength.

<b>Effect Pigment Colors</b>	781 Silver Coarse	Mesh 61-64 threads/cm (156-64 threads/inch)
	862/003 Gold Coarse	Mesh 61-64 threads/cm (156-64 threads/inch)
	863/003 Pale Gold Coarse	Mesh 61-64 threads/cm (156-64 threads/inch)
<b>Color Shades</b>	093 Colorless	Mesh 77-55 threads/cm (195-55 threads/inch) or finer
	172 Yellow Transparent	Mesh 77-55 threads/cm (195-55 threads/inch)
	370 Red Transparent	Mesh 77-55 threads/cm (195-55 threads/inch)
	567 Blue Transparent	Mesh 77-55 threads/cm (195-55 threads/inch)
	667 Green Transparent	Mesh 77-55 threads/cm (195-55 threads/inch)
	945 White	Mesh 77-55 threads/cm (195-55 threads/inch)
	948 Black	Mesh 77-55 threads/cm (195-55 threads/inch)

## Stencil

UV ink and solvent resistant emulsions must be used. Excellent results during long production runs are achieved by using Pröll Diazo-UV-Polymer Emulsion Norikop 10 HQ.

## Squeegee

All commercially available squeegees with an average hardness of 75° up to 80° Shore A.

## Auxiliaries

NoriCure<sup>®</sup> CCI LED is press-ready. For special processing and application conditions, processing agents for the adjustment of the viscosity and increase of reactivity are available upon request.

## UV Curing

Guideline: For curing NoriCure<sup>®</sup> CCI LED ink layers which were printed with a mesh 77-55 Y (195 threads/inch), an UV dose (LED-Powerline PLD 385 nm, Dr. Hönle AG / UV-Design UV-Integrator UV-4C-LED SD, spectral range: 230 – 445 nm) of approx. 1600 mJ/cm<sup>2</sup> is necessary.  
The UV dose for sufficient curing depends on ink layer thickness (printing mesh) as well as the type and color of the substrate. Depending on such parameters the dose must be adjusted.

## Processing

NoriCure® CCI LED may only be processed in areas without UV light prior to UV curing. Invisible UV rays from sunlight as well as UV rays from artificial light sources (e.g. fluorescent lamps) have to be avoided.

Necessary equipment is available from EncapSulite- International Inc., Rosenberg, Texas or EncapSulite European Office, Cologne, Germany. Making use of the following UV blocking products is especially recommended:

- UV-Stop Security Fluorescent Tubes, trade name "UV-Shrinkwrap Tube / Type C20" (clear), cut off point at 400 nm
- UV absorbing sleeves, trade name "UV-Safety Sleeve / Type C20 – clear", cut off point at 400 nm
- UV filter film, available in rolls for window application, trade name "EncapSulite UV-Filter C10"

Further information can be found on [www.encapsulite.com](http://www.encapsulite.com) or [www.encapsulite-europe.com](http://www.encapsulite-europe.com).

## Cleaning of Screens and Utensils

UNI-REIN A III or UNI-CLEANER FP61

## Shelf Life

The shelf life stated on the label assures the ink's quality and refers to unopened original cans stored in a dry place at temperatures between 5 °C (40 °F) and 25 °C (75 °F).

## Safety Precautions

UV inks which have not been cured may have an irritating and sensitizing effect to the skin and may cause allergic, hypersensitive reactions. Please use an accurate and clean working method when processing UV inks and auxiliaries. You should wear suitable personal protection equipment (gloves, safety goggles, working clothes)!

Uncured sheets are considered special waste and should therefore be cured under UV light before disposal. Please pay attention to the respective safety data sheets.

Supplementary information regarding the safe use of UV inks can be found in the brochure "UV-Trocknung" (Reference no. 205), of the Berufsgenossenschaft Druck und Papierverarbeitung, Rheinstr. 6 – 8, D-65185 Wiesbaden.

## Important

Allow the ink as well as all the auxiliaries to be added to adjust to room temperature in the closed container before use.

Printing results, to a large extent, depend on the substrate as well as the printing and application conditions. We recommend checking your printing materials under your conditions of use prior to any production runs. Materials that are supposed to be identical may vary from manufacturer to manufacturer and even from batch to batch. Some substrates and printing inks may have been treated with or contain sliding agents, antistatics or other additives which will impair the adhesion of the ink.

Ink adhesion and scratch resistance on the printed substrates have to be tested. Also the formability of the printed substrate has to be checked.

The curing of UV systems is influenced by the output and the emission spectrum of the UV bulb, thus affecting the adhesion and scratch resistance of the cured ink film.

This is a test product which is still in development. For this reason, no assurances are currently given as to type conformity, processability or long-term performance characteristics. Therefore, the customer uses the product entirely at their own risk with no guarantee.

Before starting a production run, it is necessary to test samples of each newly designed part systematically with regard to the specifications for the intended use (e.g. climatic chamber, resistance, etc.).

The information contained in the technical information/instruction sheets or other product information sheets is based on product testing conducted by Pröll. Because printing and environmental factors critically affect each individual ink application, the above mentioned information and instructions represent only general recommendations concerning product characteristics and directions for use and should not be construed as representing express warranties regarding the product. The information and instructions in no way release the purchaser from his obligation to verify and test the inks and their application for the specific request, regarding: product characteristics, weather resistance, mixing proportions, gloss, thinning, special mixtures, printability, drying speed, cleaning, effects on or of other materials to be contacted and safety precautions. All details contained in the instruction sheet "General Information on Screen Printing Inks" are to be considered. The further manufacture and use of products containing our inks by the purchaser takes place beyond our control, and the responsibility for further application and use of our product resides solely with the purchaser. Pröll disclaims any warranties, express or implied.

This information supersedes all previous technical information.