



*Innovative Inks &
Functional Lacquers*

Screen Printing Solutions for Laminated ID and Credit Cards



Lamination of PVC and PETG Materials

The solvent-based ink series **NoriCard** and **NoriCard LSI** are suitable for decoration and lamination of PVC films at temperatures of 140 °C (284 °F). If necessary, offset printability can be improved by offset primer **NoriCard 078**. The ink system **NoriCard LSI** offers additional benefits concerning occupational safety and environmental protection since it is free of aromatic hydrocarbon solvents.

If you are looking for a UV curing solution, you will make the right choice with **NoriCure® CCI**.

Furthermore, with **NoriCure® CCI LED** we succeeded in developing an ink system, which is perfectly matched to meet the requirements of curing via state-of-the-art UV LED technology.

In addition to a range of basic color shades, we focus on our customers' requirements and are looking forward to realizing individual color shades and effects according to your individual needs.



Screen Printing Solutions for Polycarbonate Cards



The new UV curing 2-component ink system **NoriCure® EVO** offers a complete range of color shades including highly opaque white color shades, which enable the realization of window applications in the segment of high quality polycarbonate cards and convinces with excellent peel strength at laminating temperatures of 180 °C (356 °F).



Protective Lacquers

Optimal surface protection on PVC and PC cards is achieved by using high gloss and extremely scratch resistant UV curing lacquer **NoriCure® CSR 03**, which protects card products from harmful mechanical and chemical impacts.

With **NoriCure® CSR 02** a protective lacquer with a matt finish is available additionally.



Signature Field Inks

All signature field inks which are part of the solvent-based ink series **NoriCard SG** as well as the UV curing ink series **NoriCure® SF** are available in different color shades from colorless to highly opaque white as well as pigmented. Both inks are suited for printing on PVC and PC monocard and overlay films of multilayer cards. The printed signature fields can be signed smear-resistant with felt tip and ball pen.



Bonding Agents / Adhesion Promoters

If a sufficient peel strength in difficult applications is not obtained, water-based bonding agent **AquaPress® CA** and solvent-based bonding agent **NoriPress® SMK** are available.

Grades of the AquaPress® CA series are optimally tuned to laminating temperatures between 90 to 180 °C (194 to 356 °F) and furthermore odorless and have low VOC content.

Special Effects

Special Effects are outstanding eye-catchers, which can often be realized by screen printing only, because it is possible to print high layer thickness and to process a broad range of effect pigments.

Chrome-like effects can be produced by using the solvent-based **Screen Printing Ink L67241**.

Under the designation **NoriCure® X-TRA** special UV curing effect color shades are available, for example chrome or rainbow-like color shades, which can transform PVC

and PC cards in some special eye-catcher. For long-term shiny appearance they can be laminated with an overlay film or overprinted with a protective lacquer such as **NoriCure® CSR 03**.

To achieve haptic surface effects on PVC and PC cards, the use of the relief lacquer **NoriCure® RSL**, which is available in glossy and matt finish as well as colorless or pigmented, is recommended.

Personalization / Individualization

A possibility of personalization is thermal transfer printing. Good ink transfer is not guaranteed necessarily on all card materials, a solution is provided by **NoriCure® TFL**.

This coating provides good ink transfer on many commercially available substrates using thermal transfer printing.



Screen Printing Solutions for Laminated ID and Credit Cards

The importance of plastic cards is increasing. It is impossible to imagine the world without plastic cards in many areas of daily life – starting with cashless payment systems such as bank and credit cards, vouchers, membership cards up to long-lasting ID documents. Of course, different application areas lay down different requirements on the materials used, which need to be taken by the film on the one hand and the ink on the other hand. As the majority of card products consist of PVC materials, polycarbonate substrates are used especially in the manufacture of high quality and long-lasting ID cards.

To achieve your individual technical requirements and design ideas Proell will support you with a comprehensive range of high quality screen printing inks for printing on PVC as well as PETG and PC substrates. We are looking forward to find individual solutions for your specific requirements. High quality plastic cards are usually made up of various ink and film layers, where an overlay film is applied as last layer by means of lamination.



UV Protective Lacquer (optional)

Overlay Film

Core Films, printed with Screen and Offset Inks

Overlay Film

UV Protective Lacquer (optional)

Our solvent-based and UV curing ink systems for lamination do not only serve decorative purposes but provide a long-term bonding between core and overlay film after lamination. Here the screen printing process especially shows its strength when coming to produce decorative metallic effects and highly opaque ink layers.

In order to ensure the desired permanent perfect appearance, it is recommended to apply an UV curing protective lacquer onto the card surface to increase the chemical and mechanical resistances of the film material and therefore extend the lifetime of plastic cards.