



# NoriCure<sup>®</sup> CSR 03

## UV Curing Scratch Resistant Lacquer for ID and Credit Cards

### Area of Application

NoriCure<sup>®</sup> CSR 03 is suitable for PC Overlay films, coated PET films, diverse PVC substrates as well as for overprinting the ink systems NoriCure<sup>®</sup> CCI and NoriCard.

### Characteristics

NoriCure<sup>®</sup> CSR 03 shows

- excellent scratch and abrasion resistance
- excellent chemical resistance
- easy processability (press-ready formulation)
- unlimited screen open time
- high gloss

### Mesh

Polyester fabrics of 140 to 180 threads/cm (355 to 460 threads/inch) are suitable.

### 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.

### Overprinting of Inks

Overprinting of UV, water-based or solvent-based screen and offset printed ink systems is possible. However, the compatibility of the systems has to be checked before starting any production runs.

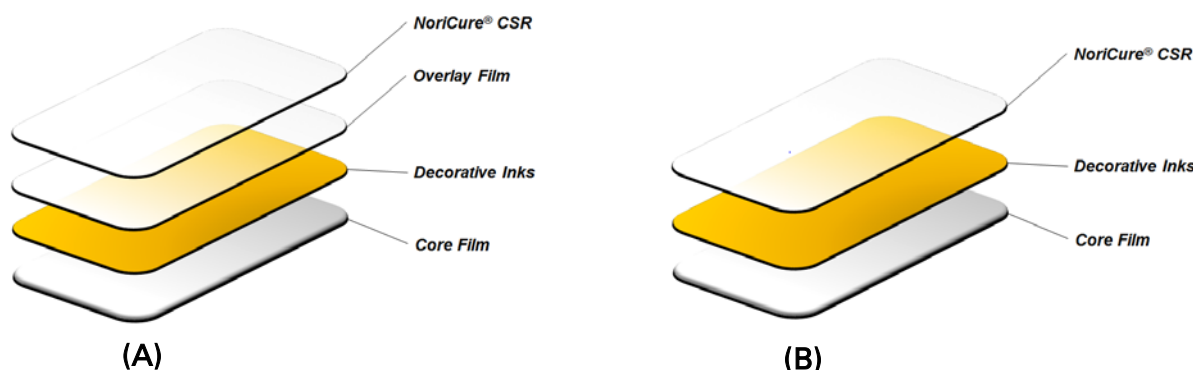
### UV Curing

Guideline: For curing NoriCure<sup>®</sup> CSR 03 layers which were printed with a mesh 150-31 Y (380 threads/inch), an UV dose (Kühnast UV-Integrator, spectral range: UV 250 – 410 nm, max. 365 nm) of approx. 150 mJ/cm<sup>2</sup> is necessary.

The UV dose for sufficient curing depends on color shade, 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

Depending on substrate and ink system, the maximum temperature for lamination is 180 °C (356 °F). The optimum optical properties and resistances are achieved if NoriCure<sup>®</sup> CSR 03 is applied to the overlay film **(A)** or directly to the decorative ink film **(B)**, respectively, prior to lamination.



## NoriCure® CSR 03

Direct sun light on open ink cans or on the ink in the stencil must be avoided!

### Post-curing

Printed NoriCure® CSR 03 post-cure even without UV light. The optimum product characteristics are not achieved before the curing process is finished (approx. 24 – 48 hours).

### 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

Uncured UV lacquers 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 lacquers. 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 safety data sheets for the ink system NoriCure® CSR 03.

Supplementary information regarding the safe use of UV inks/lacquers can be found in the brochure "UV-Drying", of the Berufsgenossenschaft Energie Textil Elektro Medienerzeugnisse, Gustav-Heinemann-Ufer 130, 50968 Köln, can be downloaded from <https://medien.bgetem.de/medienportal/artikel/TUlwMzQ->

### Important

Allow the product 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. Substrates and printing inks may have been treated with or contain sliding agents, antistatics or other additives which will impair the adhesion of the lacquer.

When using UV-curing lacquers such as NoriCure® CSR 03 the compatibility between the lacquer and the ink system to be overprinted must be tested. Tests concerning adhesion and scratch resistance as well as the suitability for further processing or converting steps are necessary.

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 lacquer film.

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.