



NoriCure[®] EVO

Two-component UV Curing Screen Printing Ink for Lamination
of Polycarbonate ID and Credit Cards

Area of Application

NoriCure[®] EVO is a two-component UV curing screen printing ink suitable for printing on PC core films used in card manufacturing.

Lamination of NoriCure[®] EVO

NoriCure[®] EVO has good lamination properties with **PC overlay films** (e.g. Makrofol[®] ID 6-2, 100 µm) at a temperature of 180 °C (355 °F) and good peel strength.

Hardener

NoriCure[®] EVO is mixed homogeneously with **Hardener 040** prior to printing.

Mixing ratio 5 : 1

This mixture is press-ready.

Pot life: 8 hours, depending on temperature and humidity.

Mesh

Polyester fabrics of 61 to 100 threads/cm (156 to 255 threads/inch) are suitable.

Processing Window for Lamination

For best results lamination should be done within 7 days after printing.

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.

UV Curing

Guideline: For curing NoriCure[®] EVO layers which were printed with a mesh 77-55 Y (195 threads/inch), an UV dose (Kühnast UV-Integrator, spectral range: UV 250 – 410 nm, max. 365 nm) of approx. 300 mJ/cm² 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 UV dose must be adjusted.

Processing

NoriCure[®] EVO 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 or 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.

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.

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.