



NoriCure[®] ORL-1/001 high gloss NoriCure[®] ORL-1/002 matt

outdoor resistant, UV stabilized

UV Curing Screen Printing Lacquer

Area of Application

NoriCure[®] ORL-lacquers varnish can be used for overprinting of solvent-based ink systems (for example, Thermo-Jet[®], NoriPUR[®]) as well as for printing on PVC self-adhesive films, Polycarbonate, rigid PVC and PMMA (pre-tests necessary). NoriCure[®] ORL-lacquers are also suited to be printed on pre-treated films printed with NoriPET[®] (e. g. MacDermid Autotype Autoflex EBG 180).

NoriCure[®] ORL-1/001 high gloss is not suited for printing "large" areas or to produce piano black effects.

The outdoor resistance properties were tested by means of an Accelerated Weathering Test by Q-Panel Lab Products QUV (lamp types UVA, UVB). The results of this test depend on different parameters such as type of substrate and its quality, combination of the printing inks/lacquers used, ink layer thickness, UV curing conditions etc.

Characteristics

NoriCure[®] ORL-lacquers shows the following properties:

- easy processability (press-ready formulation)
- unlimited screen open time
- fast processing speed
- contains silicone-based leveling agents
- good adhesion to solvent-based screen printing inks (pre-tests are necessary)
- good scratch and abrasion resistance
- high chemical resistance

Mesh

Polyester fabrics of 120 threads/cm (305 threads/inch) or coarser are suitable.

Stencil

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

Squeegee

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

Overprinting of Inks

Overprinting of solvent-based screen printed ink systems is possible. However, the compatibility of the systems must be checked before starting any production runs.

UV Curing

Guideline: For curing NoriCure[®] ORL-lacquer layers which were printed with a mesh 120-34 Y (305 threads/inch), an UV dose (Kühnast UV-Integrator, spectral range: UV 250 – 410 nm, max. 365 nm) of approx. 500 mJ/cm² 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.

NoriCure® ORL-1/001 high gloss
NoriCure® ORL-1/002 matt

Post-curing

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

Processing

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

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 lacquers 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 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 respective safety data sheet.

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 ink as well as all the auxiliaries to be added to adjust to ambient 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® ORL 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 and outdoor resistance 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.

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 with NoriCure® ORL-lacquers systematically with regard to the specifications for the intended use (e.g. climatic chamber, resistance, outdoor 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.