



NoriCure® AP

UV Curing Screen Printing Ink

Area of Application

NoriCure® AP is an UV curing ink system for printing on rigid PVC, self-adhesive PVC films, paper and cardboard.

Whether NoriCure® AP is suitable for other materials such as thermoplastics (e.g. polystyrene, pre-treated polypropylene) and powder coated or lacquered metals must be determined by precise and adequate testing.

Characteristics

NoriCure® AP

- good resistance against chemical and mechanical influences
- fast curing speed
- high gloss
- easy processability (press-ready formulation)
- unlimited screen open time
- NVP free
- solvent free

Color Shades

Basic Colors for NoriCure® AP Matching System	092 Blending Lacquer Colorless	312 Red	669 Green Transparent
	104 Yellow* ¹	368 Red Transparent	945 White
	108 Citron	467 Pink Transparent	948 Black
	171 Yellow Transparent	472 Violet	
	207 Orange* ¹	570 Deep Blue	
Process Inks (on request)	156 Process Yellow	558 Process Cyan	099 Process Paste
	357 Process Magenta	949 Process Black	
Bronze Pastes	2708 Silver (12 : 1) Mixing ratio with NoriCure® AP 092: 12 : 1	2753 Silver Coarse (7 : 1) Mixing ratio with NoriCure® AP 092: 7 : 1	

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 emulsion Norikop 2 FP.

Squeegee

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

*¹ = Not to be used for printing on soft PVC or plastics containing high amounts of plasticizers.
Not suitable for vacuum forming.

Light Fastness

High quality pigments are used for NoriCure® AP Basic Colors. The light fastness is 8 (blue wool scale) with exception 312, 368 (blue wool scale 7) and 109 (blue wool scale 6).

Weather Resistance

NoriCure® AP is not recommended for long-term outdoor use.

The weather resistance of UV screen printing inks is influenced by the substrate and especially by the degree of cure of the ink film.

Process Inks

Contrary to the basic colors, the process inks NoriCure® AP 156, 357, 558 and 949 for trichromatic printing have a silky finish after the hardening process to avoid glossy areas within the motif.

NoriCure® AP 099 Process Paste for adjusting the color density. In order to achieve best results regarding dot sharpness, NoriCure® AP process inks are generally used without thinner.

Overprint Varnish

NoriCure® UV-L 2: – high gloss lacquer for overprinting (protective coating as well as spot lacquering)
– for increasing the gloss level of halftone prints

Auxiliaries

NoriCure® AP is press-ready.

For special processing or application conditions, the following auxiliaries are available:

Thinner NoriCure® AP 090

addition up to 5 % to reduce viscosity

Blending Lacquer NoriCure® AP 092 (not suitable as overprinting lacquer)

for lighthening the Basic Colors as well as for increasing the transparency. Miscible with NoriCure® AP Basic Colors (in any ratio).

Process Paste NoriCure® AP 099

- for adjusting the color density
- by adding NoriCure® AP 099 the viscosity of NoriCure® AP inks can be increased, if necessary

Adhesion Promoter NoriCure® HV-H (adhesive resin)

can be used to improve adhesion to difficult plastic substrates: Addition of approx. 10 %

Adhesion Promoter NoriCure® HV-M (adhesive additive)

can be used to improve adhesion to metal, wood or other plastic substrates: Addition of approx. 5 %

UV Curing

Guideline: For curing NoriCure® AP ink 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 to 300 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.

Post-curing

Printed NoriCure® AP ink layers 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!

Resistances

NoriCure® AP shows good resistance against chemical and mechanical influences. Chemical resistance tests should be done 24 hours after curing.

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/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 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.

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