



NORIPHAN® HTR N

Screen Printing Ink for Lamination of ID Cards made of PC

Area of Application

NORIPHAN® HTR N is a solvent-based screen printing ink suitable for printing on PC core films used in card manufacturing.

Characteristics

NORIPHAN® HTR N is suitable for printing on white core films e.g. Makrofol® ID 6-4 250 µm. The NORIPHAN® HTR N color shades bond at lamination temperatures of 180 °C (356 °F) the white core film with a transparent overlay e.g. Makrofol® ID 6-2 100 µm.

Color Shades

Standard Silver Colors	771 Silver Fine	Mesh 100-40
	776 Silver Medium Coarse	Mesh 90-40
	781 Silver Coarse	Mesh 77-48

Basic Colors	093 Colorless HF
	171 Yellow Transparent
	321 Bright Red HF
	952/049 Black
	945/378 White HF

HF = halogen free

Basic Colors may be used to mix gold and other metallic colors.

Effect Pigment Colors

Further metallic effects and other color shades are available on request.

Mesh Count

Polyester mesh 77-48 threads/cm to 120-34 threads/cm (195-48 threads/inch to 305-34 threads/inch).

Stencil

Solvent resistant emulsions must be used. Excellent results during long production runs are achieved by using Pröll Diazo-UV-Polymer Emulsion Norikop 10 HQ.

Auxiliaries

All of the auxiliaries mentioned below are free of halogens (HF).

Thinner

Verdünner F 013 (fast)

Retarder

Verdünner M 201 (medium)
Verdünner S 403 (slow)

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Paste

Newly formulated pastes:

- NORIPHAN® HTR N 097/005 (fast)
- NORIPHAN® HTR N 097/006 (medium)
- NORIPHAN® HTR N 097/007 (slow)

Auxiliaries may be mixed with each other in any desired proportions.

Only Thinner F 013 and Thinner M 201 should be used for large printing areas.

Recommended addition of thinner: 15 – 20 %.

To print fine details, Thinner S 403 can be used alone or in combination with pastes NORIPHAN® HTR N 097/005, 097/006 respectively 097/007. The following proportions are recommended:

- 10 – 20 % Thinner S 403
- 5 – 10 % Paste NORIPHAN® HTR N 097/007

Cleaning of Screens and Utensils

UNI-REIN A III

Drying

NORIPHAN® HTR N dries by evaporation of the solvent at 80 °C (176 °F).

Note:

For protection of PC core films against solvent attack, tunnel dryers should be used also for small trial runs. Rack drying is not recommended (cracking!).

Tips on Drying

Drying performance can be improved by:

- drying at higher temperatures
- use of infrared rays (from second heating compartment on)
- completely opened exhaust air valve – good air exchange.

Drying results depend on the combination of thinners along with the thickness of the ink layer.

Bonding Strength

The adhesion of a film/ink/plastic bonding system depends on a number of variables (production, process, and structure of compound). For this reason, specific tests with respect to individual requirements are essential.

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).

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 may have been treated with or can contain sliding agents, antistatics or other additives which will impair the adhesion of the inks.

In general please refer to our technical leaflet "General Information on Screen Printing Inks" which may be downloaded from our website www.proell.de, click Downloads ⇒ Solvent-Based Screen Printing Inks.

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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.