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Norikop 8 HR

Water and Solvent Resistant
Diazo-Sensitized UV Polymer Emulsion

Area of Application

Norikop 8 HR is suitable to prepare highly durable stencils for use with water-based, solvent-based and UV curing screen printing inks, where highest quality demands are required.

Norikop 8 HR is a high-quality diazo-sensitized UV polymer emulsion with 38 % solids.

Norikop 8 HR is used in the following screen printing markets:

- **industrial screen printing**
- **graphical screen printing/promotion**
- **electronics**
- **ceramics**
- **textiles**

Color / Pigmentation

Blue

Sensitized: Green

Handle Norikop 8 HR under yellow fluorescent tubes or low wattage tungsten light.

Characteristics

- very fast sensitization
- fast exposure time, wide exposure latitude
- excellent mesh bridging
- high resolution and definition
- good resistance for large print runs
- high mechanical and chemical resistance
- optimal printing results for fine lines and halftone prints (28 L/cm)
- easily decoatable

Sensitization

Diazo powder sensitizer for direct addition to the emulsion (without prior dissolution in water).

Before being used, Norikop 8 HR must be sensitized (made sensitive to UV light). The diazo powder sensitizer is attached to the 1 or 5 liter can in a sachet. This powder is added directly to the emulsion, while stirring constantly, and is stirred in thoroughly.

Wait for at least 15 minutes to allow any air bubbles to escape. The sensitized emulsion has a pot life of approx. 4 weeks at room temperature (20 °C); 3 months when stored in a refrigerator.

**Fabric /
Pre-treatment
of the Fabric**

Norikop 8 HR is recommended for fabrics from 40 to 190 threads/cm.

Clean, grease-free fabrics are required for a high-quality stencil. We recommend pre-treating the fabric with NoriScreen EF/PR.

Coating

The number of coating operations required to obtain optimal mesh structure compensation depends on:

- fabric fineness
- condition of the coating trough
- angle of incidence of coating trough
- contact pressure and speed of the coating trough during the coating process

Coating
(Continued)

The correct coating thickness can be determined best via stepwise coating.

Manual Coating

The following can be used as recommendation when using a V-2A special steel coating trough, wall thickness approx. 1.5 mm with rounded edge:

Fabric PES		81-55	100-40	120-34	150-31
Coating*	1 P / 1 S	7 µm	8 µm	6 µm	4 µm
	1 P / 2 S	9 µm	11 µm	10 µm	7 µm
	1 P / 3 S	12 µm	17 µm	15 µm	8 µm
	1 P / 4 S	17 µm	24 µm	17 µm	10 µm

P = print side
S = squeegee side
µm = micron

* The coating thicknesses may differ from printer to printer

Automatic Coating

Fabric PES		81-55	100-40	120-34	150-31
Coating*	1 P / 1 S	9 µm	9 µm	11 µm	5 µm
	1 P / 2 S	15 µm	16 µm	15 µm	10 µm
	1 P / 3 S	20 µm	24 µm	24 µm	15 µm
	1 P / 4 S	28 µm	32 µm	32 µm	20 µm

P = print side
S = squeegee side
µm = micron

* Automatic coating machine: 350 cm/min (speed)

The coated screen should be dried at a maximum of 40 °C in horizontal position, with print side down.

The mesh structure compensation can be further improved if coating is repeated one to three times on the print side with intermediate drying.

Exposure

Exposure is carried out using a metal halide lamp with a maximum light intensity in the range from 350 to 450 nanometres. No exact times can be specified here, as the appropriate exposure time is influenced by many factors, such as fabric fineness, fabric dye, output of the lamp, distance of the lamp from the stencil, coating thickness. The appropriate exposure times for the locally prevailing conditions can be established quickly and easily with step-by-step exposure or exposure calculator.

Dyed fabrics (yellow) avoid undercuttings, and offer a wide range of exposure times without any impairment to the quality of fine lines or half-tones.

Please notice:

In order to achieve an **optimum water resistance** of the stencil for printing with water-based inks:

- **The stencil must be absolutely dry before exposure!**
- **The selected exposure time should be at the upper limit of the exposure time range! Exposure times which are too short will impair the water resistance of the stencil!**
- **Repeated exposure after development of the stencil (from the squeegee side) further increases water resistance (useful when printing large jobs).**

After exposure, Norikop 8 HR is developed with luke-warm water. Extremely fine details should be developed with a high-pressure washer.

Decoating

After cleaning the stencils Decoater NoriScreen ES G or Z 35/1 (diluted with water at a ratio of 1 : 10) is applied from both sides. After a short period of time, the stencil residue is rinsed off with water, most effectively with a shower spray. Afterwards, a high-pressure washer is recommended.

Shelf Life

Allow the product to adjust to room temperature in the closed container before use.

The shelf life stated on the label assures the product's quality and refers to unopened original cans stored in a dry place at temperatures between 5 °C and 25 °C.

Sensitized emulsions:

approx. 4 weeks, when stored dark

approx. 3 months if stored in a refrigerator.

Coated stencils in stock:

Approx. 4 weeks in absolute darkness, room temperature of approx. 20 °C and air humidity under 50 % r. F.

Prior to exposure the coated screens have to be dried in a drying cabinet for a short time, to remove moisture!

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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