Tutorial SENOLITH® UV GLOSS LACQUER FP NDC PLUS

USP:	Folding boxes in UV offset printing with low-migration SENOLITH® UV FP NDC PLUS lacquers
Effects:	Pigment lacquer effects, filigree hybrid varnishing effects
Suitability:	Cosmetics industry | Food industry | Tobacco industry
Machine requirements:	Four-colour offset press with at least one coating unit and UV equipment
Design requirements:	This folding box series is based on the already existing Arrow-Box, a shipping packaging produced using direct corrugated board printing. Design elements from this box will also be used for this folding box series. In addition, a tray will be produced to hold the four folding boxes in the carton box. Since overflowing design elements are used here, seamless transitions of the designs from tray to folding boxes must be ensured. Due to the wish that the four folding boxes in the tray should be arranged readably to form the PLUS lettering, four different designs are used to enable uniform alignment of the boxes in the tray (all fronts point forward). For finishing with pigment lacquer, a design is created that is reproducible as a line drawing and can therefore be applied over a coating plate. Line thicknesses should not exceed 2 tenths of a millimeter, positive or negative.
Description of the effects:	For the pigment lacquer effect, an oblique type pattern is created and placed over all white areas of two of the four folding boxes. A UV gloss lacquer is also used to achieve the greatest possible brilliance for the entire folding box. For the hybrid varnish effect, a very fine line pattern is designed, which is created by the hybrid effect - the slight difference in height and the resulting different reflective behavior depending on the incidence of light creates a 3D varnish effect.
Description of the print samples:	These packaging samples are intended to show that the new low-migration PLUS lacquer from our program can also be used to implement detailed varnishing effects. Two different finishings are presented: a pigment and a very filigreed hybrid application.
Notes:	As with all complex print refinements, clear project planning and coordination of all parameters with all companies involved in the production chain are essential. Materials and process steps must be defined and coordinated in advance. All varnishes are provided by WEILBURGER Graphics. Furthermore, WEILBURGER Graphics coordinates the production with all participating companies.

Realization:

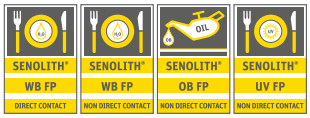
Completely assembled Arrow-Box with tray and the four different folding boxes.

First of all, the existing Arrow-Box is inspected, and the transitions of the internal graffiti design are investigated on the basis of the available data material and the print sample of the box. Based on this, the tray for holding the four folding boxes is then first designed. It must be ensured that the tray can be embedded exactly in the corrugated cardboard box without being too loose or too tight. As height for the tray, half of the inside box dimensions are chosen in order to give the folding boxes sufficient hold, but not to cover too much of their designs. The graffiti used inside the Arrow-Box is also used as the picture element for the tray. On the basis of this tray and the space now available inside the box, the outer dimensions of the four folding boxes are then defined and their contours created. The cut-outs for the folding boxes in the tray are designed as pure slot flaps based on the now known outer dimensions of the four folding boxes, so that the resulting flaps can provide a better hold for the folding boxes in the box.

When designing the folding boxes, the corporate design of WEILBURGER Graphics GmbH is used on the one hand, and on the other, the side surfaces aligned with the tray are also decorated with the graffiti design. For a seamless transition of the image from tray to folding box, the exact height of the tray for inserted folding boxes must be calculated and the cut-out to be used for each individual side surface must be determined.

The seamless text pattern for the pigment lacquer form is now generated with the pattern generator from Adobe Illustrator, converted into paths and stored as a spot color form. Halftones must be omitted here, since these cannot be reproduced qualitatively with a coating plate. Next, the pattern for the hybrid effect is generated and also stored as a spot color form. Half tones would also be reproduceable here, but in favour of the greatest possible edge sharpness of the planned 3D lacquer effect, these are also omitted. In the final stage, the forms for the flat lacquer applications are created and it has to be ensured that the adhesive flaps for all four folding boxes remain lacquer-free for optimum bonding. In the final stage, the folding boxes are imposed on a printed sheet, ink pick-up strips are placed for rarely used inks, cutting and register marks are placed and sufficient space is provided for the colour bar (18 mm) and the gripper edge of the machine (13 - 15 mm). If varnish bars are mounted at the same time, it must be ensured that they become tapered at the start of the sheet in order to prevent the plate cylinder from rocking up.

Products:



Anilox rollers:

SENOLITH® WB GLOSS PRIMER FP DC 350071	100 L/cm und 15 cm^3/m^2
SENOLITH® UV GLOSS LACQUER OVERPRINTABLE FP NDC PLUS 360435	80 L/cm und 18 cm^3/m^2
SENOLITH® WB EFFECT PRIMER PERL EFFECT 100 350329	100 L/cm und 15 cm^3/m^2
SENOLITH® UV GLOSS LACQUER INLINE FP NDC PLUS 360430	80 L/cm und 18 cm^3/m^2

Production range:

CU1:
SENOLITH® WB GLOSS PRIMER FP DC 350071

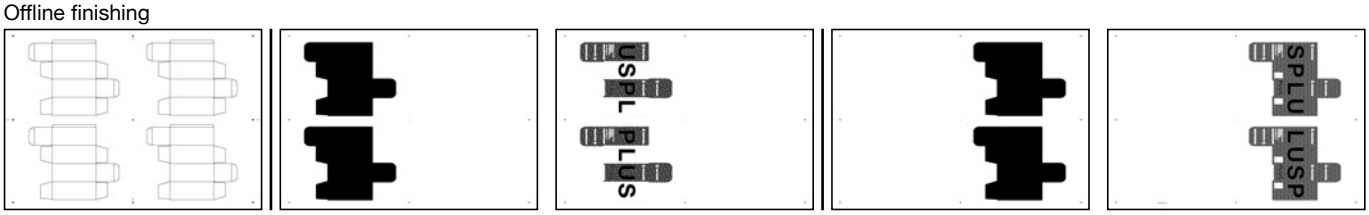
PU4:
YELLOW

PU3:
Magenta

PU2:
Cyan

PU1:
BLACK

Offline finishing



CUTTING & CREASING

CU2:
SENOLITH® UV GLOSS LACQUER INLINE FP NDC PLUS 360430

CU1:
SENOLITH® WB EFFECT PRIMER PERL EFFECT 100 350329

CU1:
SENOLITH® UV GLOSS LACQUER OVER-PRINTABLE FP NDC PLUS 360435

PU1:
SENOLITH® OB EFFECT MATT VARNISH HYBRID FP NDC 355424

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