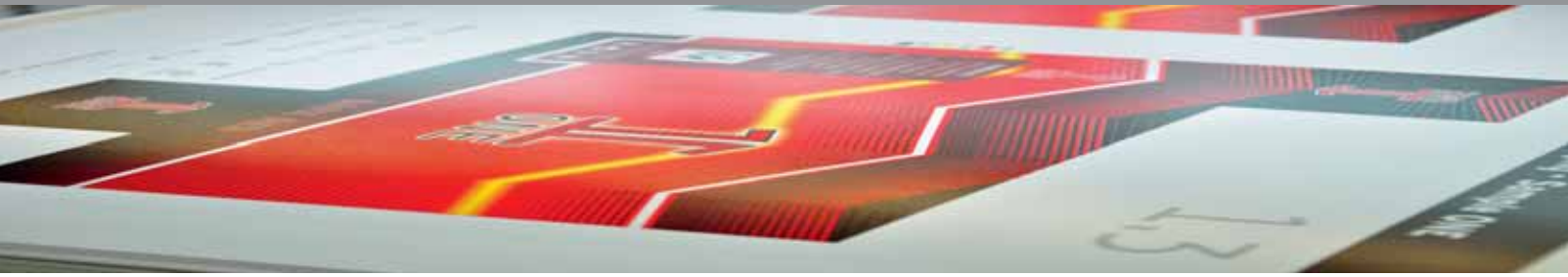


Value Added Packaging - Tutorial 1.3



ONE 1.3

USP:

Effects:

Suitability:

Machine requirements:

Design requirements:

Special features:

Very fine haptical coating effect

Fingerprint relief lacquer and deep embossing on three-colour printing

Cosmetics industry | Food industry | Tobacco industry

Four-colour offset press with double coating unit; embossing press

Distinct motif edges that can be brought out in the fingerprint lacquer

The print job was produced for low migration and is suitable for indirect food contact

Description:

This job is the offset version of a trend primarily originating from the tobacco industry (gravure printing) regarding the use of so-called fingerprint lacquers. Fingerprint lacquers belong to the group of relief lacquers and are haptically perceptible. Innovative lacquer formulations and coordinated design and production conditions now make it possible to also realise similar effects when applying these lacquers in offset printing.

The present design in Sample 1.3 is based on three inks (Black, Magenta, Yellow) and supports the lacquer effect through the printed elements. This is necessary in jobs of this kind, since the lacquer quantities to be applied in offset printing are relatively low and the visual impression of the effect produced by different lacquer layer thicknesses needs to be intensified by the coloured design of the packaging. As a result, the effect is more pronounced on dark backgrounds than on white, and filigree lacquer designs with clear structures, such as line patterns, are more easily perceived than coarse or irregular structures, both visually and haptically.

Remarks:

When preparing print jobs of this kind for the tobacco and food industries, it must be ensured that all the components used display low migration and have corresponding approvals and certificates. This applies both to the substrate used and to the printing inks and lacquers, as well as to the hot stamping foils and adhesives.

In the job presented here, low-migration inks were processed in combination with a low-migration primer on a likewise certified cardboard. These components are suitable for direct food contact. To enable the shortest possible drying times of the lacquer layers applied, the final fingerprint lacquer is, for system-related reasons, a UV lacquer and is certified for use in indirect food contact. Therefore, the print job as a whole is permissible for use in indirect food contact applications.

3D visualisation before going to press was performed using the Esko Studio Visualizer.

Value Added Packaging - Tutorial 1.3

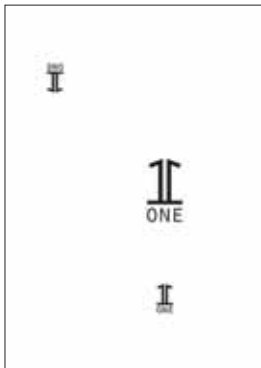


Realisation:

The design-related requirements of importance for the fingerprint lacquer are already taken into account at the design stage: strong light/dark contrasts and filigree line structures. Since design ONE already has an inherent line structure, refinement of this structure and its continuation in the lacquer effect is an obvious option. Consequently, we elaborate the colour design on the basis of the Euroscale colour space, reduced by Cyan.



Fingerprint coating form



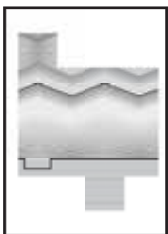
Debossing form

In the next step, we focus on the lacquer effect, gearing it to the colours of the packaging. In this context, however, we pay attention to the line structures of the effect also running over other printed elements of the packaging, such as logos and texts. This is intended to give the lacquer effect a more homogeneous look and also to reduce the complexity of the coating plate to be produced. Regarding the definition of the finest lines, we pay attention to the technical specifications of the coating plate used and, to be on the safe side, thus stay above 0.25 pt for both positive and negative in order to preferably prevent breaks in the lines or filling-in of the coating plate. The coating form is created as a spot colour, and all elements are set to overprint. In this way, we can safely put the coating forms on the topmost layers in Illustrator.

The next task is now to elaborate the embossing forms for the deep embossing. For this job, we decide to bring out only the logos. These forms are now created as spot-colour forms on the basis of the embossed contour. Halftones can also be used in this case, in order to create three-dimensional embossing dies with soft edges or reliefs. The toolmaker need only be told whether high-relief or deep embossing is involved, and which halftone value is to have zero level. This then also permits combinations of high-relief and deep embossing, which can greatly enhance the haptic and optical characteristics of the embossing, given an appropriate substrate. We, however, decide on simple deep embossing with sharp edges.

Once all the ink and embossing forms have been designed, we proceed to full-page make-up (in 3B format in this case). A clear and complete job description for the printer, the toolmaker and the finisher is standard for jobs of this kind and helps rule out sources of error ahead of producing complex print jobs. In the case of large-scale jobs, it is also always worth while to contact all the service providers even during the creative phase and discuss the individual work steps with them. This can help not only to reveal technical problem areas, but also to rule out any technology and/or material incompatibilities. Moreover, when dealing with complex jobs outside the standards, provision should also always be made for rotary proofing, in order to test the interplay of all materials and technologies under production conditions and enable optimisation before the start of production.

For final production of this job, we select a 13 cm³/m² engraved roller for the primer and a 25 cm³/m² roller for the fingerprint lacquer in order to be able to apply the highest possible quantities of UV lacquer, thereby achieving higher layer thicknesses for maximum effect.



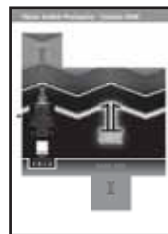
OFFLINE COATING
SENOLITH® UV GLOSS
LACQUER 360472 by
WEILBURGER Graphics



COATING
SENOLITH® WB GLOSS
PRIMER STAMPABLE
350520 by
WEILBURGER Graphics



INK
SunPak® LMQ
Yellow LMP26
by Sun Chemical



INK
SunPak® LMQ
Magenta LMP27
by Sun Chemical



INK
SunPak® LMQ
Black LMP46
by Sun Chemical