

Value Added Packaging - Tutorial 3.4



THREE 3.4



USP:

Effects:

Suitability:

Machine requirements:

Design requirements:

Special features:

Great optical depth

Holographic cold foil application with matt/gloss coating effects

Cosmetics industry | Food industry | Tobacco industry

Six-colour offset press with cold foil applicator and UV coating unit; embossing press

Distinct motif edges that can be brought out in the cold-foil and coating forms

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

Description:

The THREE 3.4 design is intended to illustrate that the intensity of the effect of holographic foils can be varied by targeted overcoating with matt coatings. This works both with cold foils and with overprinted/overcoated hot stamping foils. The effect results from the fact that the light hitting the foil is scattered by partially applied matt coatings, both when coming in and after reflection by the foil, meaning that the holographic effect of the foil can be controlled in this way. This also works when using hybrid coating systems, but we wanted to demonstrate the greatest possible variation of the effect by using a matt UV coating for this design. In contrast to the situation when using hybrid coating systems (which we show on silver foil in samples 1.1, 1.2, 3.1 and 3.2), this method can be used to almost completely eliminate the holographic effect of the foil, working as though we had applied not only this effect foil, but also an additional matt metal foil.

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 coatings, as well as to the 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. The final matt UV coating is certified for use in indirect food contact. Therefore, the print job as a whole is suitable for use in indirect food contact applications.

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

Value Added Packaging - Tutorial 3.4



Realisation:



Holographic cold foil



Matt coating form

When designing this job, we first select the suitable colour space. Its colours are greatly reduced, since the Laserline Select® holographic foil will itself generate very strong colour nuances and we do not want to overdo the colours of the design.

We next create the cold-foil form. To do so, we create a spot colour and elaborate all the elements that are later to have a metallic and holographic appearance. In this context, we bear in mind that we want to work with two different effects (matt metal/holography) and therefore create a kind of mixed form of these two effects in this spot-colour channel. All elements are subjected to manual spreading and choking, and placed on top layers in Illustrator so as to overprint. The next step is to create the matt-coating form in the same way. Again, we work exclusively with solid tones in order to avoid screening of the coating plate. Areas where the cold foil is subsequently to have a matt appearance are positioned on the cold-foil form. We can, of course, additionally use the matt/gloss effect outside the cold foil, in order to exploit the capabilities of this method to the full.

Once all the ink and coating forms have been created, we proceed to full-page make-up in 3B format, then exporting the data in the PDF-X3 (2002) standard after consulting the printer. The colour profile used for this job is ISO Coated V2 (ECI). In Acrobat, we once again check all forms for unwanted separations (in this context, it is always worth while to take a look at Black, in particular), as well as the interplay of the cold-foil and coating forms with the printing form. Since we created all colour channels in a single file, the register accuracy of all forms, or the possible presence of spreading/choking errors, can already be checked during quality assurance in Acrobat.

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 offset production of this job, we select a 13 cm³/m² engraved roller for the gloss primer, which is applied via a stripped blanket (for leaving out the glue flaps). The matt UV coating, applied offline after curing of the „foil adhesive“ (really, the term „adhesive“ is incorrect, since it is actually a highly adhesive printing ink), is processed using the same 13 cm³/m² hexagonal engraved roller.



COATING
SENOLITH® WB GLOSS
PRIMER STAMPABLE
350520 by
WEILBURGER Graphics



INK
SunPak® LMQ
Process Yellow LMP26
by Sun Chemical



INK
SunPak® LMQ
Process Magenta LMP27
by Sun Chemical



INK
SunPak® LMQ
Process Cyan LMP25
by Sun Chemical



INK
SunPak® LMQ
Process Black LMP46
by Sun Chemical



COLD FOIL
LIGHT LINE®
Laser Select® D / AL-KS
by KURZ



ADHESIVE INK