

Value Added Packaging - Tutorial 4.2



FOUR 4.2

USP:

Effects:

Suitability:

Machine requirements:

Design requirements:

Special features:

High contrast due to use of three different pigment effects

Combination of two superimposed pigments in inline and offline coating

Cosmetics industry | Food industry | Tobacco industry

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

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

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

Description:

Design FOUR 4.2 illustrates the variation of the effect achieved by using different types of superimposed pigments in combination with cold foil application. We additionally work with debossing on this job, in order to improve the haptics of the design and give it greater optical depth.

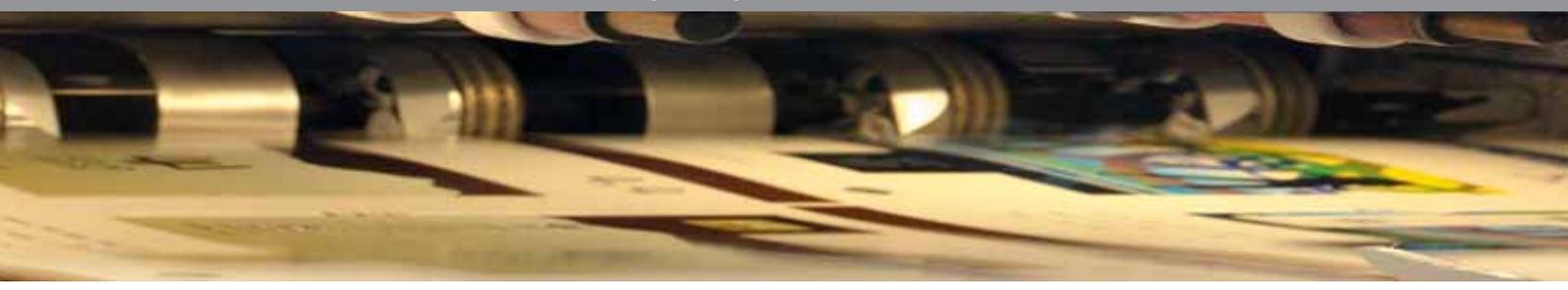
Remarks:

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.

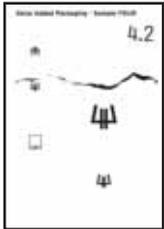
In the job presented here, low-migration inks were processed in combination with a low-migration primer and low-migration dispersion coatings on a likewise certified cardboard. These components are suitable for indirect food contact. Provided that the selected printer is also certified, the print job as a whole is thus suitable for use in indirect food contact applications.

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

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Realisation:



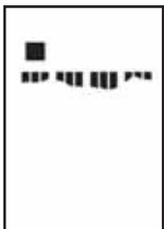
Cold foil form



Coating form for Icy White



Coating form for Magic White



Debossing form

When designing this job, we first select the suitable colour space. For this finishing example, we specifically decided to work in the field of food packaging, selecting a confectionery packaging as the basic design for FOUR and designing the basic visual elements. The chocolate is designed completely as an illustration in this context. To get the torn-off aluminium foil, we first photograph different views of a crumpled original foil with different exposure settings, subsequently editing the selected picture in Photoshop. Various image flaws are corrected at this point, and the image obtained in this way is then reduced to a greyscale version.

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 appearance. On this design, we specifically want to reduce the effect of the cold foil and therefore only bring out the aluminium foil in this form. We use the definition of the foil from the above-mentioned greyscale illustration to optically give the cold foil more reality and depth by overprinting. 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 coating forms for the two pigmented coatings in the same way. Again, we work exclusively with solid tones in order to avoid screening of the coating plates. In this instance, we apply both pigments in transparent fashion, generating a third effect by superimposing the two forms for the pigments. Finally, we create the debossing forms. Debossing is used only in the area of the chocolate, in order to optically enhance the depth of the illustration.

Once all the ink and coating forms have been created, we proceed to full-page make-up in 3B format. After consulting the printer, we then export the file in the PDF-X3 (2002) standard. 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 embossing, 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.

For final offset production of this job, we select a 13 cm³/m² engraved roller for the primer, which is applied via a stripped blanket, and a 9 cm³/m² engraved roller for the Icy White coating applied inline. When working with pigmented coatings, the dip volume of the engraved rollers is always partly determined by the size of the pigment used. With a particle size of 5 - 40 µm, Icy White is quite a fine pigment, and the 9 cm³/m² roller suffices. In applications involving two pigments, the finer pigment is usually coated first, so as not to hide the coarser pigment. The Magic White coating (20 - 200 µm), applied offline in the final step, was therefore coated using an 18 cm³/m² hexagonal engraved roller.



COATING
SENOLITH® WB GLOSS
PRIMER STAMPABLE
350520 by
WEILBURGER Graphics



INK
SunPak® LMQ
Process Yellow LMP26
by Sun Chemical



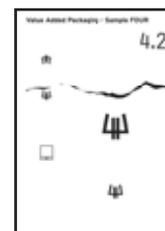
INK
SunPak® LMQ
Process Magenta LMP27
by Sun Chemical



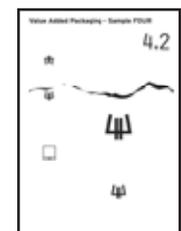
INK
SunPak® LMQ
Process Cyan LMP25
by Sun Chemical



INK
SunPak® LMQ
Process Black LMP46
by Sun Chemical



COLD FOIL
ALUFIN® KPS-OF
by KURZ



ADHESIVE INK