FOUR 4.4

**USP:** Outstanding contrast due to the combination of cold foil and matt coating application

**Effects:** Cold foil in combination with matt coating and debossing

**Suitability:** Cosmetics industry | Food industry | Tobacco industry

**Machine requirements:** Six-colour offset press with cold foil applicator and double coating unit; embossing press

**Design requirements:** Distinct motif edges that can be brought out in the cold foil and coating forms

**Special features:** The job was produced for low migration and is suitable for indirect food contact

**Description:** Design FOUR 4.4 demonstrates a very strong effect contrast, achieved by targeted combination of high-gloss cold foil application and partial matt coating. A variation of colour from silver to gold is illustrated on the cold foil, this being produced by overprinting the silver foil in different colour shades.

**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 low-migration 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.
Realisation:

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 and the logo elements in this form. We use the definition of the aluminium 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 partial matt coating in the same way. Again, we work exclusively with solid tones in order to avoid screening of the coating plates. 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 worthwhile to take a look at Black, in particular), as well as the interplay of the cold foil, embossing 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 UV primer, which is applied via a stripped blanket. The matt coating is then applied using a 9 cm³/m² engraved roller. The smallest possible application volumes should always be used when working with matt coatings, in order to obtain the maximum brilliance of the effect.