Value Added Packaging - Tutorial Nature Cosmetics

USP:

Multi-part presentation and gift box with prominent foil, bronzing and laser-cutting effects.

Description:

This 4-part box was produced to present the Merck company's Color Forecast for cosmetic applications. Its semi-annual Forecast showcases colour themes currently in fashion and how they can be achieved in cosmetic products, such as lipsticks, using effect pigments. Another field of application for multi-part designs of this kind is gift packaging.

Suitability:

Cosmetics industry | Food industry* | Tobacco industry*
* Only outer packaging on hermetically sealed containers with suitable barriers)

Print finishing:

Bronzing with effect pigments, various hot foil embossing techniques with nanoembossing, matt/gloss effects tactile varnish effects, intricate laser-cutting (for a segment of the print run).

Design requirements:

Distinct motif contours that can be rendered using hot foil finishing, embossing, bronzing and varnishing effects; homogeneous, dark colour areas for achieving high brilliance with the selected pigment varnishes.

To ensure the highest possible level of process stability, a decision was made not to mask out any of the varnishes used underneath the areas of hot foil embossing. All of the varnishes therefore had to be suitable for over-printing and over-stamping.

Materials:

Selecting the right materials, inks, varnishes and foils is very decisive on this project because it incorporates a variety of print and finishing processes. Optimum results can only be achieved in such a process with perfect interplay between man, machine and material.

Consequently, a project meeting with all stakeholders in the preparation phase is imperative: Clients, designers, producers, manufacturers and suppliers.

Their objective must be to adapt the design to what is technically feasible. This is the only way to ensure that the desired effects can actually be achieved and that technical problems are avoided from the outset.

Material selection begins with the right substrate, which is critical for the quality of the final result.

The MetsäBoard Pro FBB Bright coated folding cartonboard used here is ideally suited to demanding jobs of this kind thanks to its homogeneously coated surface, easy shaping and high dimensional stability in processing.

Machine requirements:

Four-colour offset press with coating unit and UV capability, bronzing machine, die-cutting machine, industrial high-speed laser-cutting system.

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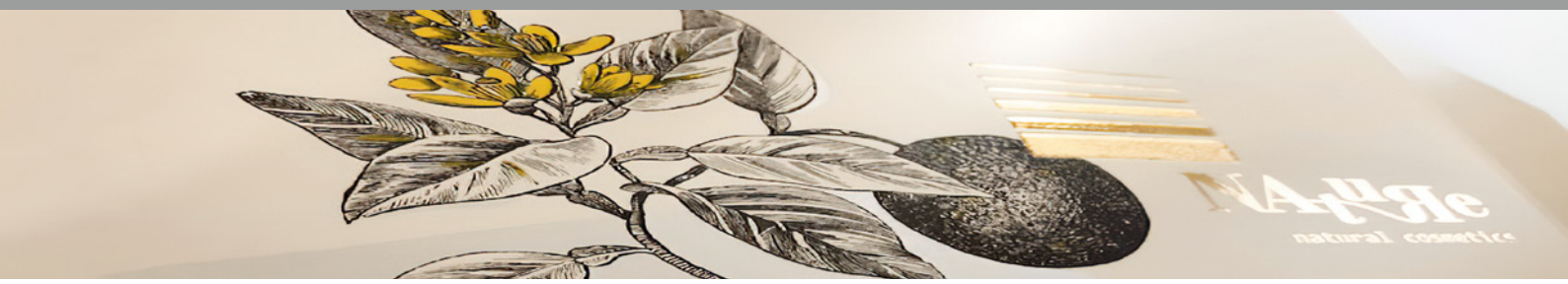


Achieving the effects:

The objective on this print job was to achieve a homogeneous interplay between the pigment effects, matt/gloss lacquer finishes and various hot foil embossing effects, some of which are combined with nanoembossing.

Natural-looking spot colours were chosen for the design to harmonise with the colour tones of the two hot foils. The print job required only three spot colours. To optimise process stability and enhance the brilliance of the final packaging product, the inks were selected in such a way that production was possible without halftone screening.

Bronzing effect: In the bronzing process, a special oil-based varnish preparation that dries by oxidation is applied first, and then dusted with a dry pigment in the bronzing machine. These areas subsequently are sealed with a dispersion coating. The partial bronzing form was created as a spot colour. It is important in this context to use simple line art without halftones. Because both coatings are applied with the same form, just one coating form is sufficient for this application process.

Matt/gloss effect: A very finely detailed matt/gloss effect was achieved. Since it would not be reproducible with a coating plate, a full-coverage gloss primer was applied first (glued flaps were masked out) and, in a second pass through the press after bronzing, a matt lacquer was printed over the gloss primer. It must be kept in mind in the design phase that all elements which are to have a glossy appearance on the end product have to be masked out for the matt lacquer form. The resulting coating form, which likewise was created as a spot colour, is therefore the "negative" of the usual gloss coating form. Because the matt lacquer is applied as a print varnish on a print unit using a standard offset printing plate, it does not require a coating plate. This cuts costs on one hand, and makes it possible to work with extremely fine detail in the coating form on the other. It is even possible here to use halftones to control the gloss values, though this technique was not used for the present design.

Hot foil embossing: A total of three different hot foil effects were incorporated in this print sample. A yellow, semi-transparent special effect foil was used to add highlights to the print image. In addition, a gold foil partially enhanced with nanoembossed elements was applied by means of relief embossing. Once again, two spot colour forms were created to produce these hot foil forms. They likewise were generated exclusively as line art. The relief profiles required for relief embossing and the engraving data for nanoembossing are added to the data by the embossing tool-maker only after a detailed briefing. Both the height of the embossed elements and their edge contours can be influenced in this process. The nanoembossing pattern can be selected from the embossing tool-maker's catalogue or designed individually based on detailed specifications.

Laser-cutting: A small segment of the print run is additionally enhanced with a detailed laser-cut in the area of the cover. In creating the cutting contour, it must be ensured that the contour itself is stable once the cut sections have been removed, or that a sufficient number of anchor points have been incorporated in the design so as to avoid weakening the statics of the packaging all too much. Cutting near the bronzed area must be avoided, because the coarse pigment could impact the laser-cutting process as a result of refraction and reflection. The contour should be so finely detailed that die-cutting is not a feasible alternative, or the design should incorporate personalised or individualised laser-cutting.

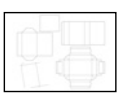
Workflow:

The design was created in Illustrator. This packaging product comprises four individual elements, which were designed separately.

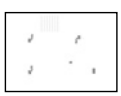
Following final quality control, the finished data was submitted in PDF/X-1a format and as an open file to the individual production partners. As a rule, the print shop handles the process of compiling the individual data sets and sheet assembly. Based on the delivered design data, the print shop also generates all the data for the coating plates, stamping dies and die-cutter, and forwards them together with the machine data and other key production parameters to the respective suppliers.

Anilox rollers:

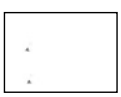
Primer:	80 L/cm and 13 cm^3/m^2
Dispersion coating:	80 L/cm and 17 cm^3/m^2



Die cutting (Die from **Marbach**)

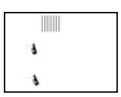


Hot foil stamping Luxor 397 (Tools from **hinderer+mühlich**)



Hot foil stamping LUMAFIN MS 710 YELLOW (Tools from **hinderer+mühlich**)

WEILBURGER Graphics SENOLITH® UV OFFSET MATT VARNISH 369003

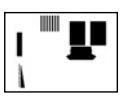


Sealed with dispersion coating

Bronzing with- **Merck** effect pigment Iriodin 6163 Icy White Shimmer

WEILBURGER Graphics SENOLITH® WB GLOSS PRIMER FP DC 350071

Epple PMS 475C PROLASER ORANGE 128834



Epple PMS 1485C PROLASER ORANGE 128833

Epple PMS 7596C PROLASER BROWN 128832

Design:
LEONHARD KURZ Stiftung & Co. KG, Julia König

Coating plates:
SCHAWK!

Substrate:
MetsäBoard Pro FBB Bright 295 g/m²

Printed at:
Vrijdag Premium Printing

Laser-cutting system and service
LasX

Production management, documentation:
Alexander Dort