

# Value Added Printing Tutorial - Cover Creativ Verpacken 06/2021



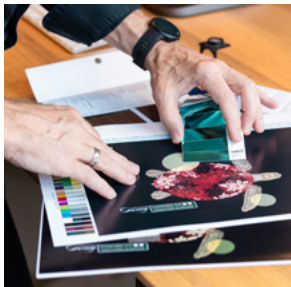
Version 1.2  
EN

**Abstract:** Heavily finished UV-LED commercial cover production for Creativ Verpacken issue 06/2021, a German trade magazine for the packaging industry.

**Refinements:** A tactile soft coating, a matt lacquer, a pigment coating as well as a total of three different hot stamping, micro and blind embossing effects were used.

**Machine requirements:** Five-colour offset press with coating unit, UV configuration and inking units with UV LED lamps, hot stamping and die-cutting machine, guillotine

**Design requirements:** This cover is intended to demonstrate that a high degree of finishing of printed products, such as luxury goods packaging, does not reduce their recyclability. A sea turtle is chosen as the cover motif. Designer Martin Appoldt explains: „The sea turtle stands as a symbol for a fragile and threatened ecology like hardly any other animal. And this is despite - or perhaps even because of - its massive shell, which was able to protect its sensitive interior perfectly over millions of years until just a few decades ago. This hard shell is, so to speak, its protective shield on the outside and thus fulfils functions very similar to product packaging. This can be used as a bridge to the cover design. The different surfaces of the animal now serve as a projection surface for different finishes. There are no limits to the design possibilities and a wide variety of finishes and effects can be homogeneously integrated into the graphics.“



The luxurious appearance is provided by the printed graphics, filigree floral elements that replace the massive horn structure of the shell, tactile effects such as soft coating and blind embossing as well as diffraction effects through hot stamping transfer and pigment coatings.

**Materials & production:** **Substrate:** MetsäBoard Pro FBB Bright. A fully coated, bleached board with white reverse side, high whiteness on the front and back and excellent sensory properties make it ideal for special effects and for sensitive premium products. It is light and stable and can be used in direct contact with food. Available in a basis weight range of 180-350 g/m<sup>2</sup> for offset, gravure, flexo and digital printing.



**Print cover outside:** Offset printing 5c with UVALUX® LED U540 Commercial ink series and SENOLITH® UV LED print lacquer as well as full-surface applied tactile SENOSOFT® WB matt coating.

**Offline finishing cover outside:** Hot stamping transfer plano with LUXOR® blue metallic of the Creativ Verpacken lettering and the lettering line in the header. In a further hot stamping pass, the contours in the shell are finished with a diffractive LIGHT LINE® decor as plano and partly as prismatic relief stamping. The tactile SENOSOFT® matt lacquer applied over the entire surface is embossable and does not have to be cut out. This eliminates the need for a coating plate, which in turn saves costs and resources.

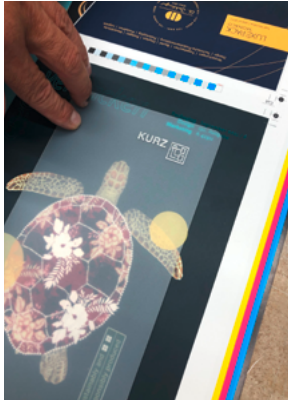
**Printing inside cover pages:** Offset printing 5c with UVALUX LED U540 Commercial colour series with SENOLITH® UV LED protective coating and partially applied SPECTRAVAL™ pigment coating.

**Offline finishing of the inside cover:** Hot stamping transfer of the entire silhouette of the turtle with a light blue, transparent décor, whereby the fine structures are additionally incorporated in the shell as micro-embossing with in the embossing tool.

Multi-level blind embossing of the structures in the yellow coloured areas and the circular structures in the dark areas are deeply debossed from the outside of the cover. As a special feature, the effect is mirrored on both sides by countering the motif to the reverse and the use of counter embossing dies.

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## Realisation:



**Pre-press:** During production planning, the ideal sheet format for this job was determined to be 720 x 510 mm. Two four-sided covers with 5 mm adhesive spine are imposed on this according to the publisher's layout and bleed specifications. A head-to-head mounting is chosen as the layout scheme to be used. This enables a homogeneous distribution of forces in the embossing machines and easier mounting of the stamping dies. Furthermore, ink release strips, registration marks and plate guides mounted on the sheets. It is important to ensure that the varnish bars are pointed so that the varnish plates do not swing up during production. It is important to ensure that the varnish bars are pointed so that the varnish plates do not swing up during production. Only the colour control strip still has to be fitted by the printer in accordance with their standards. Sufficient space is thus left on the sheet for this and the grippers (between 13 and 20 mm, depending on the press and control strip).

**Printing:** The print production is carried out in UV-LED offset printing with UVALUX LED U540 Commercial colour series in the Euroscale colour space. To protect the inside front cover (U2) and the full-format ads on U3 and U4, an embossable and block-proof SENOLITH® UV LED print lacquer is applied on both sides in the fifth printing unit. Care must be taken on the inside to ensure that the adhesive back is kept free of lacquer. Since the lacquer is applied via the printing unit, however, a conventional printing plate instead of a lacquer plate is sufficient here to implement the spot lacquer form, which saves both costs and resources. The embossable printing varnish does not have to be cut out for hot embossing.



**Varnish and pigment effects:** On the U1 - i.e. the cover front - a strong tactile soft effect is to provide the basis for the two high-gloss hot stampings and the blind embossings. This soft effect is achieved by applying a tactile SENOSOFT® WB matt varnish over the entire surface. The special feature of this varnish is that it can be excellently over stamped and thus forms a perfect basis for the filigree hot stamping that takes place offline later. As a result, this coating does not have to be cut out in filigree, the risk of mismatches in the subsequent offline hot stamping process is eliminated and a stripped rubber blanket can be used instead of a coating plate, which in turn saves costs and resources. Only for the partially applied Spectral™ pigment coating on the inside of the cover U2 does a coating plate have to be produced. Here, too, care must be taken to ensure that no varnish is applied in the adhesive spine, which must be kept free.

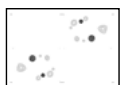
**Hot stamping:** A total of three hot stamping applications with different decors are planned. Two of them on the outside U1 of the cover and one large application including a micro-embossing on the inside U2 of the cover. The elaborately crafted embossing tools were commissioned long before going to press. Especially the stamps with the micro-embossing have a somewhat longer production time here, which has to be taken into account in the production planning. To ensure the sharpest possible reproduction of these filigree stampings, all tools have been ordered with form counter-pressure (matrice). The outer, upper cutting marks per side, which are also transferred to the tool data, simply serve as an assembly reference.

**Blind debossing:** After the hot stamping has been completed, various blind debossings are implemented for more haptics and depth. These are all designed as deep stamps (seen from the outside of the cover) to protect the soft lacquer surface on U1. This prevents partial scrubbing of the outer effect coating during transport or later use of the magazines.

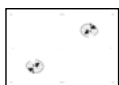
## Anilox roller:

## Pigment coating:

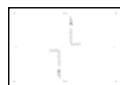
110 L/cm and 14 cm<sup>3</sup>/m<sup>2</sup>



**Blind debossing**  
realised with tools  
from H+M at  
**GRÄFE**  
Druckveredelung



**Kurz**  
LIGHT LINE®  
Water Select AL-XL  
applied with tools  
from H+M at  
**GRÄFE**  
Druckveredelung



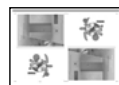
**Kurz**  
LUXOR® 308 MTS  
applied with tools  
from H+M at  
**GRÄFE**  
Druckveredelung



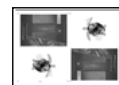
**WEILBURGER**  
Graphics  
SENOSOFT® WB  
MATT COATING FP  
350210



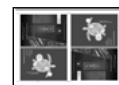
**WEILBURGER**  
Graphics  
SENOLITH® UV  
OFFSET MATT  
LACQUER LED  
369867



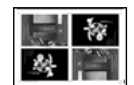
**Zeller + Gmelin**  
Yellow  
UVALUX® LED  
U540



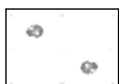
**Zeller + Gmelin**  
Magenta  
UVALUX® LED  
U540



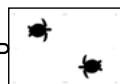
**Zeller + Gmelin**  
Cyan  
UVALUX® LED  
U540



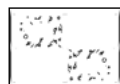
**Zeller + Gmelin**  
Black  
UVALUX® LED  
U540



**Microembossing**  
realised with tools  
from H+M at  
**GRÄFE**  
Druckveredelung



**Kurz**  
COLORIT® 307004  
Blue Dimension  
applied with tools  
from H+M at  
**GRÄFE**  
Druckveredelung



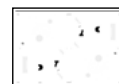
**WEILBURGER**  
Graphics  
SENOLITH® WB  
CARRIER COATING FOR  
EFFECT PIGMENTS FP  
350147  
with Spectral™  
Blue from  
Merck



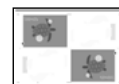
**WEILBURGER**  
Graphics  
SENOLITH® UV  
OFFSET MATT  
LACQUER LED  
369867



**Zeller + Gmelin**  
Yellow  
UVALUX® LED  
U540



**Zeller + Gmelin**  
Magenta  
UVALUX® LED  
U540



**Zeller + Gmelin**  
Cyan  
UVALUX® LED  
U540



**Zeller + Gmelin**  
Black  
UVALUX® LED  
U540

Concept & Design:  
**g.a.s. unternehmenskommunikation gmbh**

Hot transfer products:  
**LEONHARD KURZ Stiftung & Co. KG**

Substrate:  
**MetsäBoard Prime FBB Bright - 250 g/m<sup>2</sup>**

Inks:  
**Zeller + Gmelin GmbH & Co. KG**

Varnishes:  
**WEILBURGER Graphics GmbH**

Pigments:  
**Merck KGaA**

Hot stamping & Blind debossing:  
**GRÄFE Druckveredelung GmbH**

Tools:  
**Hinderer + Mühlich GmbH**

Dryer / UV LED lamp systems:  
**IST METZ GmbH**

Production management, Documentation:  
**Alexander Dort**

Printed by: **Holzer Druck und Medien Druckerei und Zeitungsverlag GmbH & Co. KG**

connection of competence

