

TUTORIAL - WATERPROOF BEVERAGE COOLER



USP:	Highly decorated and functional folding box in offset printing with a water-resistant inner tray
Effects:	Strong tactile and optical contrast through soft/matt and gloss/relief coatings, water-resistant barrier coating
Suitability:	Cosmetics industry Food industry Tobacco industry
Machine requirements:	Five color offset printing press with one coating unit as a minimum, screen printing machine, die-cutting machine and a folder-gluer machine
Design requirements:	The color space is based on the brand and product design of the two CLUB-MATE beverages to be packaged at the Loscher Brewery. For this purpose, blue is created as a special color in addition to the Euroscale color space. A strong and clear optical separation of both products runs through the complete design. In order to achieve this optimally and homogeneously, the internal components tub and separator are printed on both sides. For maximum water resistance, the tray is designed so that no cardboard edges protrude inwards. The complete design is worked with clearly defined motif edges.
Description of the effects:	Bottom and lid of the outer body are coated with two different screen-printing effect lacquers (SENOSCREEN® UV ANTI SLIP LACQUER 363055 and SENOSCREEN® UV RELIEF EFFECT LACQUER WATER DROPLETS 363056) in addition to the fully applied tactile SENOSOFT® WB MATT COATING FP NDC 350210 . These screen-printing lacquers are designed to give a strong matt/gloss effect to the SENOSOFT® WB MATT COATING FP NDC 350210 . The relief lacquer spreads over the entire packaging like water droplets, giving a feeling of freshness and coolness. On the inside, SENOLITH® WB BARRIER COATING 350025 is applied over the entire surface as additional protection.
Description of the print samples:	This functional, four-part folding box consists of two different substrates (MetsäBoard Classic FBB for the outer body (lid and bottom) and MetsäBoard Prime FBB EB for the inner, waterproof components tub and separator). The aim of this project is to demonstrate that an intelligent combination of design, substrate and the new SENOLITH® WB BARRIER COATING 350025 waterproof folding box packaging can be produced without the use of plastics, polymer layers and films and which can be 100% recycled in waste paper cycle. Furthermore, this print sample demonstrates that the intelligent use of effect coatings can also enhance the tactile and visual appearance of such functional packaging and create a sensory relationship with its contents.
Notes:	<p>As with all complex print finishing processes, clear project planning and coordination of all parameters with all companies involved in the production chain is essential. Materials and process steps must be defined and coordinated in advance.</p> <p>All coatings are provided by WEILBURGER Graphics. WEILBURGER Graphics also accompanies the production at all companies involved.</p> <p>The newly presented SENOLITH® WB BARRIER COATING 350025 has been tested for its suitability for food packaging by independent testing institutes and has received certification. A harmless use for fruit/vegetable packaging, frozen food, pet food and similar product packaging is thereby possible.</p>

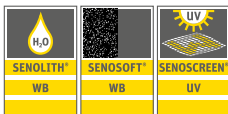

Realization:


Functional, four-piece folding box:
 MetsäBoard Classic FBB in 340 g/m² for the outer body (lid and bottom) and MetsäBoard Prime FBB EB 265 g/m² for the inner, water-proof components tub and separator.

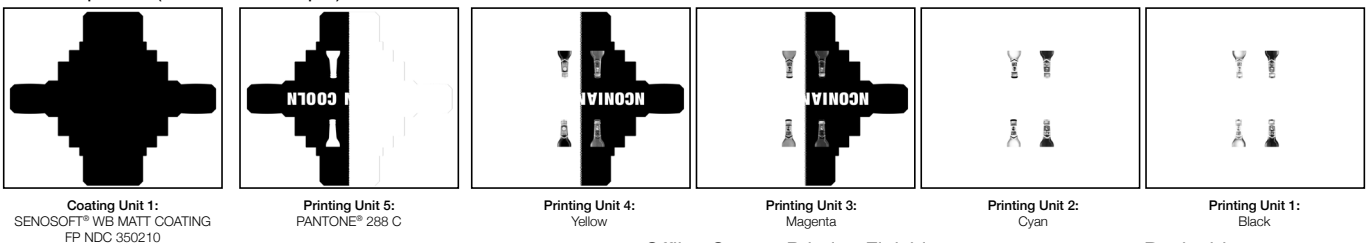
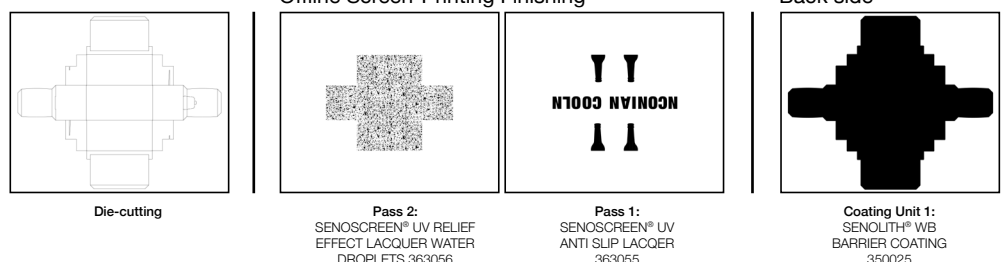
First the manufacturing of the folding box was carried out by the project partner Spiegel Verpackungen. The goal was to manufacture an outer packaging for two trending drinks CLUB-MATE and CLUB-MATE COLA from the Loscher Brewery, which could hold a 330 ml bottle from each drink and be capable of taking crushed ice or cold water to function as long lasting hermetically sealing cooler. For this purpose, a cubic double walled outer tub with bottom and lid was made based on the bottles 'dimensions. An inlaying water-resistant tub was developed in a way, that no cardboard edges were pointing inwards. Additionally, this tub features a lid with holes integrated in the die-cutting to place both drink bottles. Furthermore, a water-resistant separator with cooling slits for both bottles was also constructed. This separator will later take up the ice and avoid a possible blocking of the inlet of the two bottles. The water resistance of the tub design was first researched and optimized by laboratory experiments. After achieving a water resistance of over 7 days with the new SENOLITH® WB BARRIER COATING 350025, the manufacturing was approved, and the graphic design process was started.

During the graphic design process the two bottle images were clipped-out and inserted. The optical separation of both areas for all 4 pieces based on the product design guidelines were generated, and the surrounding text "FRANCONIAN COOLNESS" was spaced out in a way that no technical cut-outs and/or overfills occur within the 18 characters. This was followed by the design of the coating forms. While the SENOSOFT® WB MATT COATING FP NDC 350210 and the SENOLITH® WB BARRIER COATING 350025 are applied full cover, the screen printing forms for both SENOSCREEN® UV ANTI SLIP LACQUER 363055 and SENOSCREEN® UV RELIEF EFFECT LACQUER WATER DROPLETS 363056 were done as spot coatings. Since both effect coatings are UV based, special attention was placed to avoid cracks over the coating layer during the die-cutting process, therefore 2 mm spaces for creasing and cutting lines were kept. To ensure that the appearance of the water droplets is as realistic as possible, all sides should be designed so that the shape of each individual droplet later aligns itself with gravity when the packaging is standing upright. All coating forms are created as special colors. Half tones are avoided since they are not reproducible whether over a coating plate nor over a silk screen.

The data are exported in PDF/X4 format with ISO Coated Color Intent including all spot color forms and sent to Spiegel Verpackungen for further processing. There the nesting is done and the two screen printing forms with the same stand are forwarded to Rieker Druckveredelung.

Products:

Anilox Rollers / Screens:

SENOSOFT® WB MATT COATING FP NDC 350210	16 cm ² /m ² Tri-Helical anilox
SENOLITH® WB BARRIER COATING 350025	22 cm ² /m ² Tri-Helical anilox
SENOSCREEN® UV ANTI SLIP LACQUER 363055	Tissue number 60
SENOSCREEN® UV RELIEF EFFECT LACQUER WATER DROPLETS 363056	Tissue number 24

Print Sequence (on the lid example):

Offline Screen-Printing Finishing

Back side
