

TUTORIAL – INMOULD CUPS PRODUCTION



USP: Reusable plastic cups with the new, dishwasher-safe, heat-resistant and easy-to-use SENOLITH® WB GLOSS COATING FOR INMOULD LABEL LA 4-14/400 A.

Machine requirements: 4-color sheet-fed offset press with coating unit

Project description: In order to demonstrate the application possibilities of the new SENOLITH® WB GLOSS COATING FOR INMOULD LABEL LA 4-14/400 A in the production of reusable plastic tableware, an in-mould cup production is realized with MCC KARYDAKIS.



Browser-based, interactive and photorealistic 3D model of the in-mould cups with model selection and AR function, to be found via the QR code.



www.weilburger.com/wa/IML-Cups.html

A total of two different motifs from WEILBURGER Graphics' current corporate design will be implemented. Both motifs feature the new WEILBURGER Graphics key visual – **QIS - Quality. Innovation. Sustainability.** – is used. Both cups are complemented by the corporate design elements of WEILBURGER Graphics and the company's social network activities. QR codes are integrated into the design both for the social accounts and as a link to the project's landing page, where all technical information on production, the tutorial and interactive, responsive and real-time rendered 3D models of the two cups can be accessed. This means that all information can be easily accessed using a smartphone camera.

The advantage of the new SENOLITH® WB GLOSS COATING FOR INMOULD LABEL LA 4-14/400 A is its ease of processing. This in-mould coating is a new product from WEILBURGER Graphics that has been developed primarily for greater durability and therefore a longer life cycle for the products manufactured with it. The new SENOLITH® WB GLOSS COATING FOR INMOULD LABEL LA 4-14/400 A is not only highly heat-resistant, but also has increased resistance to moisture and condensation. Products coated with the new SENOLITH® WB GLOSS COATING FOR INMOULD LABEL LA 4-14/400 A can even be pasteurized, which is a significant advantage over conventional in-mould coatings, particularly in the area of sales packaging for yoghurt and other dairy products.

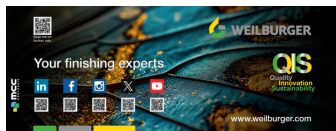
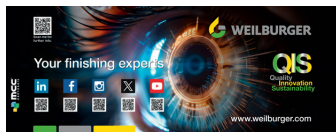
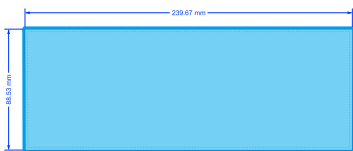
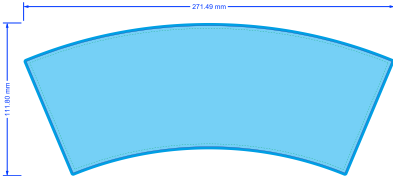
Requirements technical design: The challenges for the technical design are limited in this production. As the cups are produced in 4c Euroscale in consultation with the print shop and the coating form is applied over the entire surface, the only thing that needs to be taken into account here is how the cups are unrolled based on the dimensions specified by the print shop. The transitions of the surrounding motifs are realized by technical gradients so that they are not visible in the end product. Only the conical deformation of the unwinding must then be realized on the basis of the specified values.

Requirements graphic design: The 4C Euroscale is selected as the color space. The technical gradients on the right and left for the design of the transitions of the cup processing are created in 100% black. For the QR codes, a technically specified minimum size must be ensured so that they can still be captured and read by the cameras of current smartphones.

Notes: As with all major print productions, 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.



Realization:



The printer's specifications for design and distortion as well as the two final designs for the in mould cups.

For once, the implementation of the designs is not a major challenge with these motifs. As these are simple four-colour conversions in the Euroscale color space, all design elements can be implemented using a simple graphic design.

In both versions, the two images – the eye and the feather – are placed in the background and all the graphic elements of the corporate design and the new QIS key visual are placed above them. The social network icons are also placed in the same way. In all design work, a balanced weighting of the design elements across the entire outer skin of the cups must be ensured.

The required QR codes are then created in InDesign, which has an integrated QR code generator in newer versions, as URL QR codes in such a way that the character color is generated in an unembellished black. By using the URL version, these codes are then immediately recognized as links when scanned with modern smartphone cameras and opened in the smartphone's browser. Today, this works with almost all smartphone models and operating systems and special apps are generally no longer necessary.

These QR codes are then exported as EPS files and integrated into the design in Illustrator and highlighted in white for better legibility.

All QR codes are now tested again with a smartphone to ensure they work. As the landing page for the project, which can be accessed via the QR code above, does not yet exist at the time the print data is created and would therefore generate an error page when the QR code is scanned, a test page is created on the WEILBURGER Graphics web server under the intended URL. In this way, the functionality of these QR codes can also be checked.

Once the two designs have been approved, they are distorted according to the printer's specifications. This is necessary so that the designs, which are currently still rectangular, produce a final, suitable optical image when projected onto the cup unwinding, which is defined as a truncated cone by the conical shape of the cups.

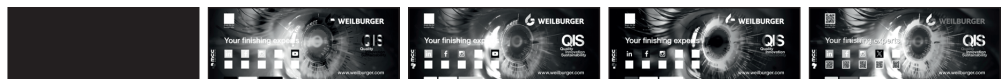
This distortion can be carried out either manually in Illustrator directly using the deformation tool or using special software solutions, which are primarily used in label production.

Finally, all data is exported in PDF/X3 format and the open data is compiled for transfer to the print shop. ISO Coated V2 Color Intent is selected as the output profile in consultation with the print shop.

Products used:



Print sequence cup variant 1:



LW1:
SENOLITH® WB GLOSS
COATING FOR INMOULD
LABEL LA 4-14/400 A

DW4:
Yellow

DW3:
Magenta

DW2:
Cyan

DW1:
Black

Production partners:



Print sequence cup variant 2:



LW1:
SENOLITH® WB GLOSS
COATING FOR INMOULD
LABEL LA 4-14/400 A

DW4:
Yellow

DW3:
Magenta

DW2:
Cyan

DW1:
Black