

Press release - for immediate publication

WEILBURGER Graphics shows new application possibilities for barrier coatings in the food industry.

Complete replacement of PE coatings for higher recyclability of fibre-based food packaging possible.

Gerhardshofen, 14. April 2022 – Fibre based packaging such as folding cartons plays a decisive role in primary and secondary packaging in the food industry. Particularly in the case of To-Go and refrigerated packaging, however, these must - not least on the basis of legal requirements - have a sufficient barrier layer on the inside to protect the packaging from moisture and grease penetration, but also to protect the food from migration. Today, this inner coating is usually made of Polyethylene (PE) and the resulting high plastic content of the composite materials makes such packaging less recyclable. The necessary thermal recycling also contributes negatively to a not negligible increase in CO₂ emissions in the recycling process. WEILBURGER Graphics GmbH, an internationally active manufacturer of varnishes, inks and adhesives for the graphic arts industry based in Gerhardshofen, Franconia, offers a comprehensive range of barrier varnishes that make it possible to dispense with PE coatings on various types of packaging thanks to their diverse barrier properties.

Together with the STI Group, the company has now realised a demo project with high market proximity in order to illustrate the barrier function of the SENOLITH® WB BARRIER COATING FP PLUS 350023 and to make its function measurable. This project involved the realisation of a total of four different To-Go packaging designs for confectionery and similar products, such as are commonly found as transport packaging at the POS in confectioneries and bakeries, in patisseries and also in supermarket and fast-food chains. All four folding boxes were produced as mixed sheets and thus with the same printing parameters. In addition to CMYK with Pantone 190 C, Pantone 7471 C and Pantone 874 C 2K (a two-component gold), a total of three other special inks were used on the outside. All inks and coatings used were of course designed to be low-migration. The protective coating used on the outside was SENOLITH® WB GLOSS COATING RUB RESISTANT FP PLUS 350279, which is characterised by an excellent balance of gloss and very high abrasion resistance. On the other hand, two flexo inks from the new SENOFLEX® WB INKS FP DC series, certified for direct food contact, were applied to the reverse printing - and thus to the inside of the boxes. Both spot inks were formulated by WEILBURGER Graphics according to Pantone 190 C and Pantone 5463 C on the basis of the supplied ICC and colour profiles of the offset inks and the substrate used - a CrownBoard Prestige in 340g/m². SENOLITH® WB BARRIER COATING FP PLUS 350023 was then used as a protective and barrier coating, which was simply applied over the coating unit like a normal varnish using a 20 cm³/m² Hashur anilox roller.

"It is precisely this simplification of production, in conjunction with the high barrier performance of our impregnating coating and the additional option of brand-enhancing inside printing for brand owners and printers, that we believe is

groundbreaking for this industry sector," says Bastian Pinsenschaum, Head of Technical Service at WEILBURGER Graphics GmbH. Bastian Pinsenschaum continues: "The conventional use of PE coating on the inside, which is in direct contact with foodstuffs, is usually applied to the unprinted substrate before printing. This means that printing on the inside is normally not possible without an extremely high level of effort. Coupled with the good recyclability of such packagings through the use of our barrier coatings and the deliberate avoidance of the use of plastics, we have fulfilled all our objectives and created an excellent added-value alternative for this market segment of food packaging."

The final packaging from this production has already been successfully tested at the TU Darmstadt according to PTS RH021/97 Cat.1 for its recyclability in the packaging paper cycle.

The demo packaging was produced on a Koenig & Bauer Rapida 106X-7+L, which is a hybrid press featuring the latest printing technology, seven inking units and a coater, and is capable of handling both conventional and UV inks and coatings. The press will be officially inaugurated at the end of April during a customer workshop hosted by the STI Group at its Greven facility.

Jakob Rinninger, CEO of the packaging manufacturer STI Group explains about the project: *"By using modern sustainable barriers, we want to expand the range of applications for fibre-based packaging. Our approach is based on the idea of the circular economy and coincides with the sustainability goals of our customers to avoid plastics in fibre-based packaging as far as possible. As part of a development partnership with our coating supplier WEILBURGER Graphics, we have therefore designed a monomaterial solution that is particularly suitable for frozen or To-Go products. Both segments are characterised by their above-average growth - we see great potential here for more sustainable packaging solutions."*

Arno Dürr, Sales Manager of WEILBURGER Graphics GmbH, concludes: *"It is precisely such close cooperation with our customers, not least in product development, that has distinguished us as a service-oriented and reliable supplier to the Graphic Arts industry for decades. We are proud when this results in outstanding product developments and – as in this case – also completely new and more than just adequate solutions for urgent market requirements. We are sure that this barrier solution, which is both simple in terms of process technology and, above all, fully recyclable, will be accepted by the market very quickly. As a result, we will once again be able to make our contribution to more sustainability in the packaging industry and an improved circular economy."* Arno Dürr continues: *"Of course, as usual, we have also prepared a tutorial and further information for interested customers and brand owners for this project, which can be obtained via our website or our Technical Service. Our staff will of course also be happy to answer any requests regarding the products used, the certificates already available or the application process."*

Further information: www.weilburger.com

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Caption:

First design variant of the final To-Go packaging with flexo inks applied on the reverse side and certified for direct food contact from the brand new SENOFLEX® WB INKS FP DC series and functional, fully recyclable barrier based on SENOLITH® WB BARRIER COATING FP PLUS 350023.



Caption:

Second design variant of the final to-go packaging with flexo inks applied on the reverse side and certified for direct food contact from the brand new SENOFLEX® WB INKS FP DC series and functional, fully recyclable barrier based on SENOLITH® WB BARRIER COATING FP PLUS 350023.



Caption:

First variant of the To-Go packaging in the closed state.



Caption:

Bottom view of the first WEILBURGER Graphics Design variant with further information.



Caption:
Second variant of the To-Go packaging in closed state.



Caption:
Bottom view of the second WEILBURGER Graphics Design variant with further information.



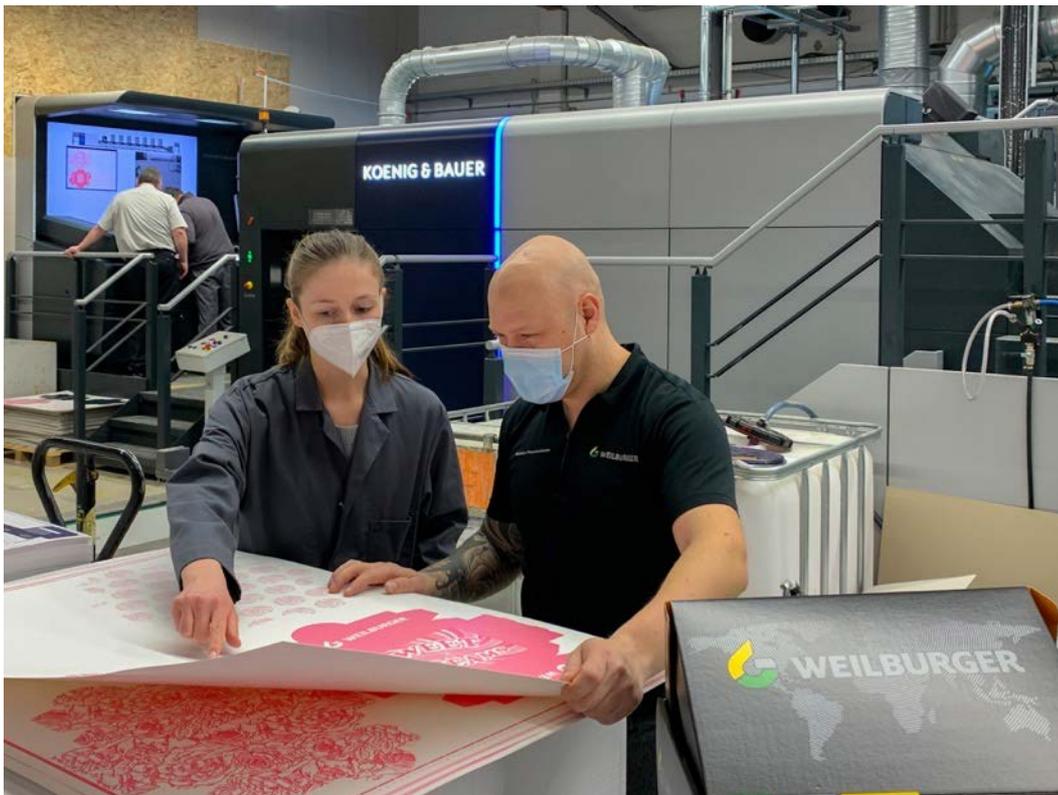
Caption:

Both WEILBURGER Graphics variants of the closed To-Go packaging in direct comparison.



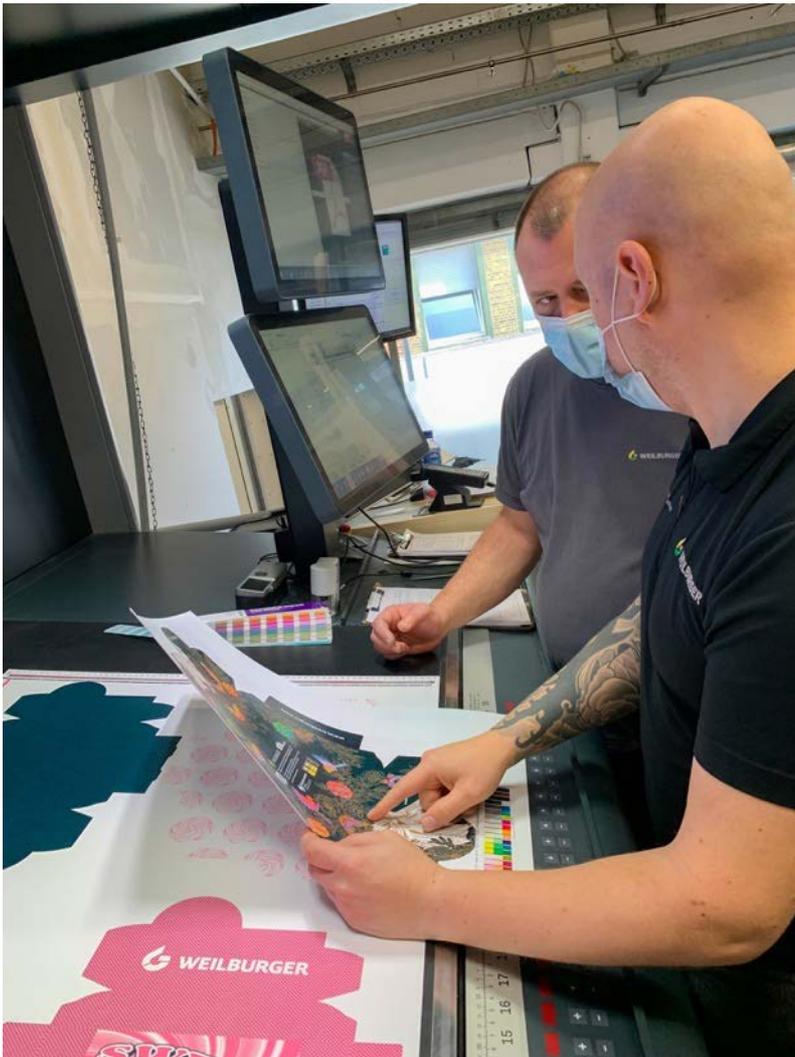
Caption:

Interior view of the two WEILBURGER Graphics To-Go packaging variants.



Caption:

Jessica Raich (Project Manager Circular Innovation, STI Group) and Bastian Pinsenschaum (Head of Technical Service, WEILBURGER Graphics GmbH) during the coordination process of the SENOLITH® WB BARRIER COATING FP PLUS 350023 applied on the reverse side. © Photo: STI Group, Meike Dihstelhoff.



Caption:

Bernhard Arndt (Technical Sales, WEILBURGER Graphics GmbH, rear) and Bastian Pinsenschaum (Head of Technical Service, WEILBURGER Graphics GmbH, front) during final colour matching. © Photo: STI Group, Meike Dihstelhoff



Caption:

Bastian Pinsenschaum (Head of Technical Service, WEILBURGER Graphics GmbH) during the final ΔE check of the flexo inks of the SENOFLEX® WB INKS FP DC series applied on the reverse side to the offset inks applied on the straight side. © Photo: STI Group, Meike Dihstehoff

People:**Caption:** Günter Korbacher - Managing Director of WEILBURGER Graphics GmbH**Caption:** Arno Dürr - Sales Manager of WEILBURGER Graphics GmbH**Caption:** Bastian Pinsenschaum - Head of Technical Service and Product Management at WEILBURGER Graphics GmbH



Caption: Logo WEILBURGER Graphics GmbH

PrintCity | Alliance Member

Caption: PrintCity | Alliance Member



Caption: ClimatePartner logo

Worldwide.

Nearby.

On Top.

Weilburger is one of the most important developers and manufacturers of functional coatings and lacquers for industrial and consumer goods plus special coatings for the graphics industry. Weilburger coating solutions create values and convincing product benefits everywhere, worldwide and in all industrial sectors. They preserve and protect, enhance functions and embellish your products. They give your products an unmistakable look and feel. They work on metals, plastics, wood and foil and also on glass, ceramics, paper and cardboard. ► Weilburger functional coatings and lacquers create surfaces which are precisely what people worldwide are looking for.

www.weilburger.com

STI Group

As a pioneer in the packaging industry, the STI Group stands like no other company for innovative, sustainable and creative products and services that move markets and make the group of companies a strong partner for strong brands.

With excellent consulting expertise, the best service and maximally efficient processes, the STI Group is a holistic problem solver for its customers, reducing complexity and creating a unique buying experience.

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