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GETTING THE BALANCE RIGHT – RESPONDING TO CUSTOMER DEMANDS

SUSTAINABILITY AND PRODUCTIVITY ARE THE TWO KEY TRENDS WITHIN THE FOLDING CARTON INDUSTRY TODAY – AND THE TWO ARE INTRINSICALLY LINKED.

AN ARTICLE BY JIM BUCHANAN

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The development of sustainable packaging solutions is not by any means a new phenomenon, but there has been a massive acceleration in the past ten years or so, as awareness of environmental issues has dramatically increased. Responding to changing consumer behaviours, brand owners have adopted a more responsible packaging policy, including the design and production of packaging for a circular economy. Many brands are making very public, corporate pledges to achieve specific sustainability-related targets by 2025 and in response to this, sustainability has become a greater priority for suppliers across the industry.

As suppliers, we work to ensure ink and coating solutions are environmentally-friendly, with high levels of bio-renewable content, while also ensuring that these inks function well with printing presses running at optimum speed, as productivity remains a key concern for folding carton printers. The challenge is achieving the right equilibrium of quality, productivity and sustainability. Sun Chemical is dedicated to optimisation of these performance attributes through extensive R&D and innovation. For example, unlike some traditional offset direct food contact inks, the new SunPak DirectFood Plus

technology is designed to give the robust performance level and colour strength typically associated with conventional litho inks, thereby ensuring that high productivity is maintained.

There has been significant growth within food packaging and in particular the food service sector, for folding carton, with surges in demand for takeaways, drive-thru, convenience stores and on-the-go food all driving this trend. Converters are actively looking for the opportunity to replace plastic barriers in fibre-based food packaging with functional water-based barriers, that could be applied on site on an offset printing press.

Sheetfed offset printing, which has typically been used for folding carton, is also now being challenged by web-fed solutions such as electron beam offset and water-based flexo, which both offer automated online printing and converting solutions, sustainably, at high speeds. Electron beam offset has already made an impact on the flexible packaging sector due to the process enabling the elimination of solvents resulting in a cleaner and safer working environment, boosting both the productivity and the sustainability credentials of converters.

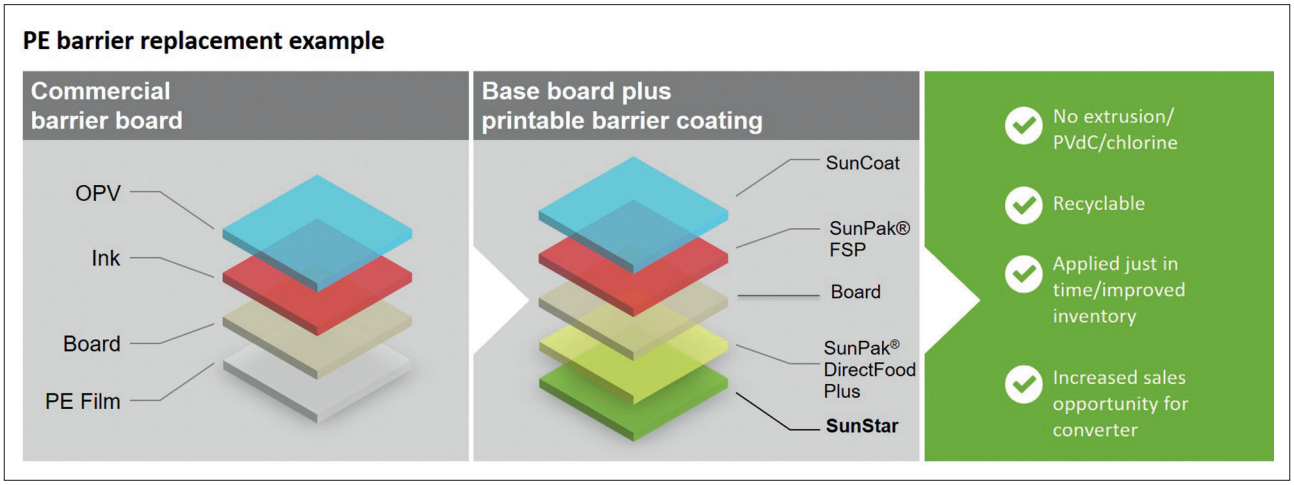
UV printing offers well known advantages of high productivity and highly decorative effects in carton printing, but has come under scrutiny in recent years due to raw material sourcing and reclassification issues. The UV print industry is in the process of evolution towards LED, firstly in commercial print where it is well established and now starting to penetrate carton packaging.

Sun Chemical is in the process of market validation of high-performance LED offset inks for food compliant packaging. This provides yet another opportunity to reduce carbon emissions, increase energy efficiency and produce higher quality print.

> Sun Chemical's SunPak DirectFood Plus series of sheetfed offset inks are also ideally suited for folding carton converters.

Comprising only raw materials that have been approved for use as food ingredients, Sun Chemical's aforementioned SunPak DirectFood Plus series of sheetfed offset inks are also ideally suited for folding carton converters wanting to print on the inside of food packaging where direct food contact is a possibility. By using SunPak DirectFood Plus in combination with a dedicated SunStar Direct Food Contact Waterbased OPV, converters can eliminate the plastic barriers inside packaging. The solution is food-safe while also offering the necessary resistance properties against oil, grease, or water. These coatings enable standard paper disposal with complete re-pulpability, and create an option for compostability, as well as industrial and at-home recycling. This enables sound management of the packaging and all its elements throughout its lifecycle.

Furthermore, Sun Chemical's flagship low migration food packaging offset ink set, SunPak FSP, is based on renewable bio-based materials and has achieved a new standard in eco-friendliness through a combination of compliance and sustainability. Not only is the ink set compliant with all existing food packaging legislation worldwide, but it has also been independently tested by Beta Analytic, the world leader in carbon-14 measurements, to prove the high level of its environmental sustainability.



Considering the application of SunPak DirectFood Plus inks and SunStar WB OPV on the inside of the carton and SunPak FSP on the outside, Sun Chemical offers a sustainable 'turnkey' system for inside and outside the box that ultimately promotes increased efficiency, reduced waste and greater adaption of clean and environmentally sound technologies and industrial processes,

With converters facing increased levels of customer demand, they require not only inks but also tools that streamline the printing processes and increase productivity, while remaining sustainable. Colour management tools are increasingly being used to help to address such demands. Sun Chemical's SunColorBox is a set of tools and services that enables consistent and accurate digital colour communication throughout the entire packaging supply chain.

A key solution available as part of SunColorBox is SunECG – which meets the demand for extended colour gamut (ECG) printing. It offers a seven-process-colour solution that minimises and in some cases eliminates the need for spot colours whilst maintaining excellent colour accuracy. Using

SunECG has a positive impact on not only productivity but also on the sustainability of processes, as the colours stay fixed on the printing units and therefore the press does not need to be cleaned as often.

Sun Chemical is committed to providing innovative and environmentally- friendly solutions that optimise productivity for customers. We remain aligned with the United Nations' 2030 Agenda of Sustainable Development through our own sustainability goals and we continue to work with partners, associations and industry leaders to drive forward solutions that contribute to a more circular economy. ■