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Pouches are the latest trend in the print packaging industry. Some market experts assert that the global pouch market is expected to be over 30 billion over the next decade. Food and beverages, home care, and cosmetics are among the growing industries fueling pouch sales. Growth in flexible packaging continues to create new areas of opportunity for converters and new challenges.

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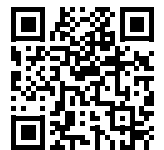
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Studies suggest shoppers will pay a premium for sustainably packaged products. Photos courtesy of Flint Group.



Recyclability & Circularity

Consumers Support Sustainable Brand Packaging

By **Matthew Rowland-Jones**, Sustainability Officer, Flint Group

Sustainability has never been more central for the printing and packaging industries. As market priorities shift and change, the focus on this topic has stayed strong.

The challenge is clear. Printers are under pressure to deliver higher quality and speed than ever before, but with reduced impact on the natural world. The push comes from consumers, who are demanding brands play their part in a low-carbon world, legislation that puts sustainability at the top of the business agenda and corporate

strategy in response to pressures along the value chain.

However, “sustainability” is an umbrella term covering many different topics. For some businesses, sustainability means managing their carbon footprint or reducing reliance on virgin plastics, whereas, for others, it encompasses more traditional Corporate Social Responsibility (CSR) activities, for example, supporting community projects. When today’s market is emphasizing the need for clarity and transparency, we must go deeper, and it’s because of

this that the circular economy has become an important area of focus.

Across the printing and packaging sectors, circularity is about reducing the reliance on virgin materials and maintaining materials in a continuous recycling loop, reducing the amount of material that ends up in landfills.

The push towards recyclability and sustainability is evident in consumer preferences. Studies from management consultancy firm, McKinsey¹, show that more than 60 percent of shoppers are



Ink and coating innovation has seen rapid development in supporting circularity.

willing to pay a premium for products in demonstrably sustainable packaging. The same research also highlights the importance of Environmental and Social Governance (ESG) claims. Products aligned with clear sustainability claims boast higher growth performance than those without.

We see this rising circular economy interest in our discussions with customers. Clients in the Paper & Board sector often seek information on compostability and how the approach can fit into a modern circular packaging economy.

In the flexible packaging and

narrow web categories, the recyclability of plastic-based products is a key priority. This also includes questions about how we can adequately recycle more flexible packaging, particularly those with printed and laminated structures, and the processes that need to be in place to achieve this.

Looking further ahead to the future of packaging and label design, there is growing interest in developing barrier coatings and metallic inks that could supplement, or even replace, the functionality of foil applications. With more research and development investment, this could result in the down-gauging of packaging structures and reduce the emissions generated in the production of packaging.

Recycling Rates in Paper and Film Packaging

As we look to improve the circularity of the wider packaging sector, there are big gains to be made in waste recovery rates. Estimates from the The Recycling Partnership's Film and Flexibles Coalition² put the curbside residential recovery rate of film and flexible packaging in U.S. residential areas at just 2 percent. Paper and paperboard packaging, however, has seen significant progress. Intelligence firm Statista³ projects the recycling rate of paper and paperboard in the U.S. to be almost 68 percent in 2022. In both cases, there is still further to go in achieving a consistent and reliable circular economy.

At the same time, global legislation is putting pressure on brand owners to embrace circularity. For example, Extended Producer Responsibility (EPR) regulations put an obligation on

producers to take responsibility for the end-of-life disposal of products and the packaging they are supplied in. This gives financial incentives for reducing the volume of packaging waste entering landfills, encouraging greater use of recycled materials in new packaging developments.

A key barrier to the wide-scale adoption of circular design lies in the availability of recycled material. Several well-publicized rPET (recycled PET plastic) shortages, for example, have brought new pressure as material becomes scarcer and costs increase over and above virgin materials. The result is tighter margins, longer lead times and a detrimental effect on the consumer experience.

Expanding the Role of Inks

When we think about circularity in packaging design, we often go straight to material substrate redesign, but we must not underestimate the role of inks and coatings. It is essential to develop the next generation of inks and coatings, believing that they must contribute more on the journey to a circular economy.

Notably, the caustic bath phase could cause inks and coatings to bleed, contaminating the caustic bath and discoloring the substrate, making it unsuitable for use in a true closed-loop process, such as bottle-to-bottle or tray-to-tray. The affected material would be downgraded to secondary plastic applications with lower commercial value.

However, ink and coating innovation has seen rapid development in supporting circularity. This includes the formulation of inks that use responsibly sourced biomaterials over synthetic in-

gredients and coatings designed to increase the yield of recyclate in the label recycling industry. Of particular interest for pressure-sensitive labels and shrink sleeves applications, deinking technologies are progressing and offer opportunities for printers seeking to support the circular economy, including new primers and overprint varnishes.

When labels are designed with circularity in mind, an overprint varnish can safeguard ink during the caustic wash, preventing bleeding, abrasion and contamination by keeping the ink on the label itself. This means it can be easily removed from the recycling process along with the label or shrink sleeve substrate. This also streamlines the recycling process, reducing the time, energy use and costs that are typically associated with label removal.

Another option is a deinking primer. Where an overprint varnish keeps ink securely held to the label substrate to avoid contamination, the deinking primer is designed to release ink cleanly into the recycling caustic wash, avoiding contamination.

Both approaches tackle the significant challenge of increasing recyclate yield and improving availability and accessibility.

There is also opportunity for inks and coatings to support business-wide sustainability drives in other printing processes. For example, today printers and converters can access inks that are nitrocellulose (NC) free, which reduces the release of volatile organic compounds (VOC) during the curing process. And, with the right technology in place, these inks can be created to C2C (cradle-to-cradle) material health certification. Through the expertise

of a leading global supplier, inks can contribute to reduced overall carbon emissions.

The pressure to close the loop and create a more sustainable printing sector is growing, and it's vital that every part of the packaging and label supply chain contributes to this. There is tremendous opportunity to use ink and coating technology to support a strong, eye-catching aesthetic and reduce the industry's reliance on virgin materials to create a more robust circular economy.

- 1 <https://www.mckinsey.com/industries/packaging-and-paper/our-insights/sustainability-in-packaging-inside-the-minds-of-us-consumers>
- 2 https://recyclingpartnership.org/wp-content/uploads/dlm_uploads/2021/04/FF_Whitepaper_final.pdf
- 3 <https://www.statista.com/statistics/278254/total-us-paper-and-paperboard-recovery-rate/#:~:text=The%20recycling%20rate%20of%20paper,nearly%2068%20percent%20in%202022>

ABOUT THE AUTHOR

Matthew Roland-Jones is Head of Sustainability at Flint Group. With more than 20 years' experience in packaging sustainability, Matthew is responsible for delivering strategic and tactical initiatives for Flint Group as one of the world's leading suppliers of inks and coatings for the printing and packaging industries.



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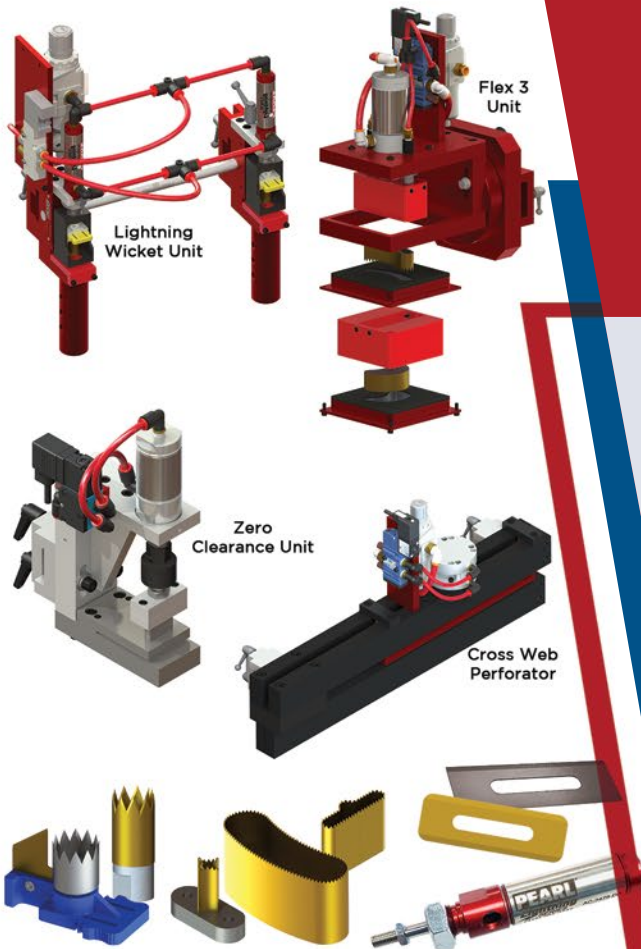
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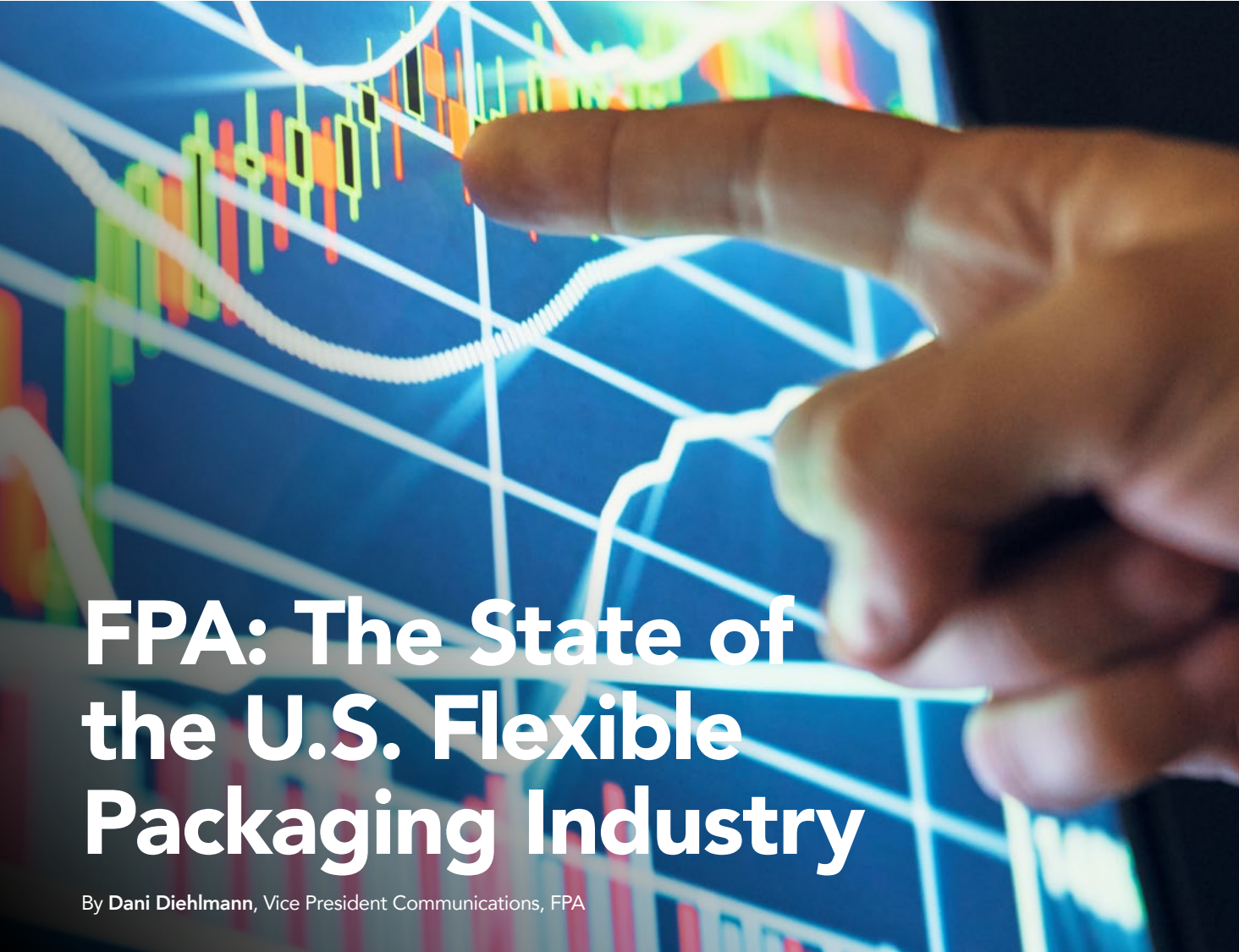
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FPA: The State of the U.S. Flexible Packaging Industry

By Dani Diehlmann, Vice President Communications, FPA

The Flexible Packaging Association's (FPA) recently published annual *State of the U.S. Flexible Packaging Industry Report* provides industry converters, suppliers, investors and analysts with insight into the performance of the U.S. flexible packaging industry over the past year. This definitive source of data and information also examines several other aspects of the industry including:

- Performance (growth, revenue/volume expectations, profitability, capital spending)

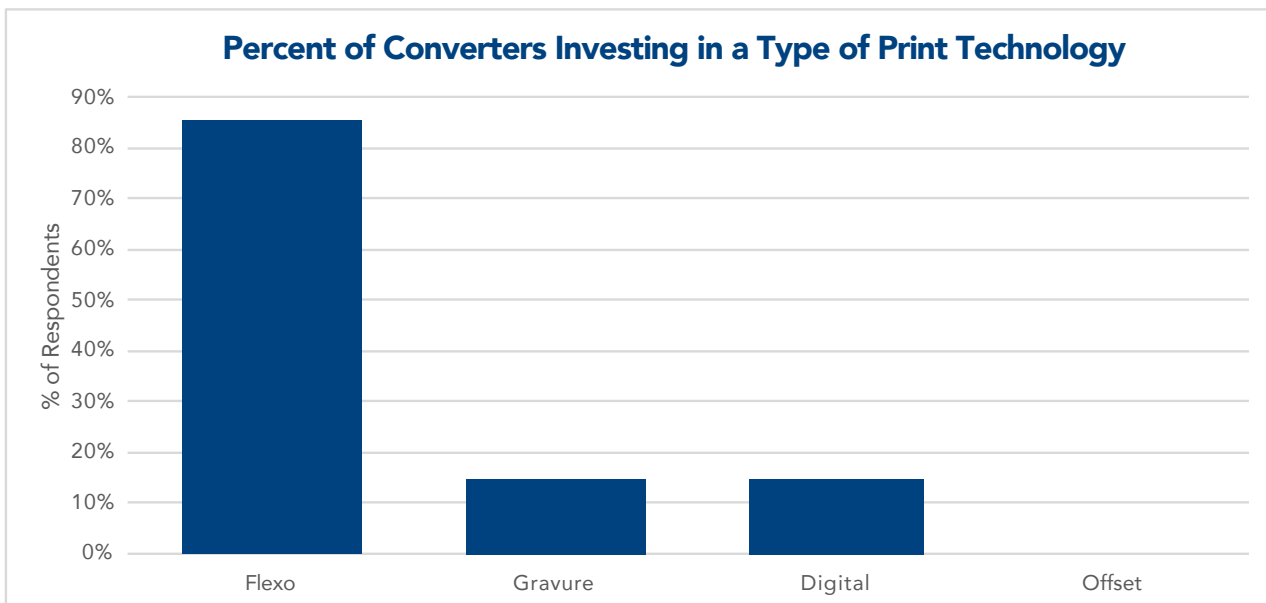
- Materials and processes (printing, expected material usage)
- End-uses (end-use forecast, U.S. Census Bureau retail segments data)
- Structure and consolidation (merger and acquisition activity)
- Imports and exports (trade outlook)
- Industry vision, challenges and critical issues.

The report covers the entire flexible packaging industry,

including the segment of the industry that adds significant value to flexible materials, usually by performing multiple processes. This segment of the industry was estimated to be \$34.3 billion in 2022 and does not include retail shopping bags, consumer storage bags or trash bags.

U.S. Flexible Packaging Industry Performance

The total U.S. flexible packaging industry was estimated to be \$42.9



Source: FPA 2023 State of the Industry Survey

billion in annual sales for 2022, an increase of 15.3 percent from the recalculated \$37.2 billion in 2021. The economic analysis group, Inforum, retained by FPA, estimates that the flexible packaging industry will grow to \$44.7 billion in 2023, for a growth rate of 4.2 percent; and estimates that the flexible packaging industry will grow to \$50.6 billion by 2027, for a CAGR of 3.3 percent from 2022-2027.

Flexible packaging represents 21 percent of the total \$180.3 billion U.S. packaging industry and is the second largest packaging segment behind corrugated paper at 22 percent. Over 85 percent of survey respondents experienced higher growth in 2022 than in 2021 — with 86 percent expecting higher revenue in 2023.

In an analysis of 2022 flexible packaging shipments by NAICS groupings from the U.S. Census Bureau, the largest category related to flexible packaging is the area of “Plastics Packaging Film and Sheet (including Laminated

According to the report, printing, bag/pouch making, laminating and stand-up pouch production remain the most common processes done by converters.

Manufacturing,” which made up about \$16.1 billion in 2022. This was followed closely by “Plastics Bag and Pouch Manufacturing” which generated \$14.9 billion in value.

Materials and Processes

Flexible packaging companies utilize several materials and processes to produce flexible packaging. Films and resins accounted for the largest spend for converters with

the two categories making up over two-thirds of material purchases — films are 47 percent; resins are 23 percent. Within films, polyethylene remains the dominant material, with 96 percent of converters responding to the survey saying they use PE. Polypropylene and polyester are the next most frequently used categories.

According to the report, printing, bag/pouch making, laminating and stand-up pouch production remain the most common processes done by converters with more than 75 percent of converters saying they perform those processes. Other processes such as coating, extrusion and labeling, among others, help converters differentiate themselves from their competitors. While not cited as a specific process, sustainability capabilities and the ability to handle and provide unique materials that include post-consumer recycled content, bio-based or paper-based substrates, will further allow converters to differentiate themselves.

In looking at flexible pack-



shipped as unprinted and 12 percent using rotogravure. Digital printing continues to make inroads, albeit slowly as it still accounts for under 1 percent of all shipments, but 23 percent of respondents claim to have digital printing capabilities. When looking at where converters are making future printing investments, 85 percent said in flexo, while 15 percent cited investments in gravure and the same, 15 percent, in digital printing.

Data Sources

FPA gathers the information contained in the report through several reliable industry sources, including the FPA members' State of the U.S. Flexible Packaging Industry Survey; the FPA non-members' Industry-Wide Converter Survey; the Annual Survey of Manufactures (ASM), published by the U.S. Census Bureau; the U.S. Department of Labor; the U.S. Department of Commerce; industry analysts and investment banking reports.

Data collected from these sources provides a more complete picture of the U.S. flexible packaging industry and helps to crosscheck information regarding industry size, structure, market segments and key packaging products. The report is available to all members and is available for purchase by non-members. ■

ABOUT THE AUTHOR

Dani Diehlmann is the Vice President of Communications for the Flexible Packaging Association and has over 20 years of experience in the flexible packaging industry.

aging structures sold by survey participants, “Rollstock” remains the dominant format produced by converters with 96 percent saying they produce that format, accounting for 57 percent of dollar value and by far the largest category, as has been the case in past years. Rollstock uses include primary product filling, secondary/sleeve wrap, bundling and overwraps.

“Premade, Stand-up, Non-retort Pouches” is the next most prevalent category, produced by close to one-half of survey respondents, followed by “Premade, Lay Flat, Non-retort Pouches.” While the two premade formats are produced by many survey respondents, their actual value of total production is much smaller (6-8 percent) for each format. Most other categories were produced by fewer than 20 percent of converters showing they may be more niche products.

When looking at the type of products that are used in the rollstock category, the “Bag & Pouches, Stand-up, Non-retort” format is the leader in both participation (67 percent) and the highest over-

When looking at where converters are making future printing investments, 85 percent said in flexo, while 15 percent cited investments in gravure and the same, 15 percent, in digital printing.

all dollar value (23 percent). “Bag & Pouches, Lay Flat, Non-retort” is the only other rollstock category also produced by over half of survey respondents and with the same value at 23 percent. These were the two leading categories from last year’s survey, having just switched the top position.

On the printing side, flexography continues to be the most prevalent technology, accounting for 72 percent of all shipments, followed by 15 percent of items



American Roller

Flexible Packaging Solutions

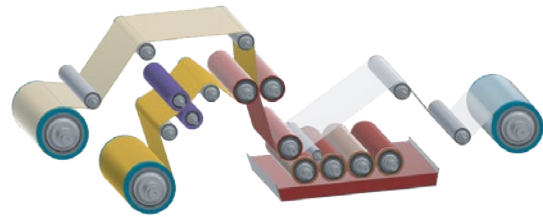
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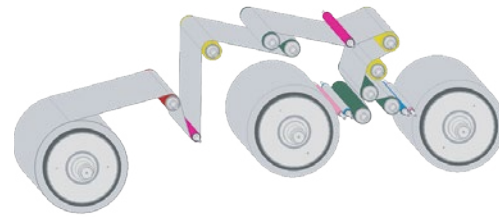
Plasma Coating Applications

- Backing
- Entrance/Exit
- Load Cell
- Tension Leveler
- Transfer

Roller Covering Applications

- Bowed
- Coating
- Laminating Nip
- Lay On
- Wrinkle Elimination

Slitting



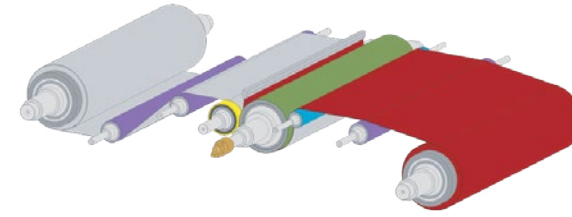
Plasma Coating Applications

- Bed
- Drive
- Entrance/Exit
- Transfer
- Load Cell

Roller Covering Applications

- Bed
- Drive
- Load Cell
- Transfer
- Wrinkle Elimination

Extrusion Coating



Plasma Coating Applications

- Coating Pan
- Drive
- Entrance/Exit
- Oven Idler/Bar
- Thermal Transfer
- Transfer

Roller Covering Applications

- Coating
- Drive
- Lay On
- Load Cell
- Thermal Transfer
- Wrinkle Elimination

Offset Gravure



Plasma Coating Applications

- Entrance/Exit
- Ink Pans
- Thermal Transfer

Roller Covering Applications

- Gravure Nip
- Thermal Transfer

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Custom built roll-to-roll pilot coater for printed electronics - 4 station. Photos courtesy RK PrintCoat

Addressing Bio-film/Compostables and Plastic Film Processing Challenges

By Tom Kerchiss, Chairman, RK PrintCoat Instruments Ltd.

There are a number of bio-based and other materials becoming available that go some way towards meeting environmental concerns. The one that perhaps everyone will be familiar with is cellulose, the main cell wall constituent of plants.

Typically associated with paper and board, the fibers when separated and processed using small amounts of natural and synthetic binders lead to the production of cellulose film or cellophane. Cellulose can also be

made into cellulose acetate. This is manufactured by cellulose reacting with acetic anhydride.

The formulae is precipitated in water, dried and dissolved in acetone prior to being cast as a film. In its uncoated form it is highly permeable to moisture but is highly resistant to bacteria, aroma and flavor. Most cellulose-based films are coated, metallised or laminated. Coatings can be synthetic or bio based.

Biopolymers can be obtained directly from natural substances that include polysaccharides and

proteins or by the polymerisation of monomers derived from a biomass. An example that most packaging technologists will be aware of is polylactic acid or PLA.

Bio-based polymers can be an alternative to materials such as petroleum-based plastic rigid and flexible filmic materials. Bio-based materials are being developed, as we all know, to be biodegradable and/or are compostable when they reach the end of their life cycle. But it is far from a straightforward process; ink manufacturers,



The FlexiProof 100 LED UV.



The VCML Pilot Coater with touch screen control.

coating suppliers and other supply chain partners are involved in any development program. Also, in the loop are those connected with determining whether materials will run effectively on the various types of processing machines without compromising on product viability and commercial objectives.

The production of plastic film and subsequent conversion will undoubtedly become more focused. Customer bespoke filmic production for specialist applications is likely to remain important and for the reasons now outlined.

The technical characteristics and performance properties of filmic-related materials have enabled converters to produce products that would have been impossible to create with paper-based materials. Structured filmic multi-web or combo materials have enabled converters to produce packaging with graphics that could withstand not only the temperature extremes associated with frozen foods and pasteurization, but also the wear and tear of product filling lines.

Consider for example oriented polypropylene. Films such

as oriented polypropylene (OPP) films when surface treated are often suitable for conversion with water-based inks, adhesives and cold seal, as well as with heat-activated sealants and coatings.

OPP films that have the ability to be convertible on both sides can be printed primarily by flexo, gravure or conceivably by a hybrid arrangement, laminated or metallized to produce cost-effective packaging products that look good and with good barrier properties. However, and from an ink formulator's perspective, polypropylene is perhaps the film with the greatest potential for variance owing to the presence of antioxidants, stabilizers and slip compounds.

Filmic structures including OPP present problems if an operator treats them in a cavalier fashion. Not all films are the same; all have their quirks. But this can also be said of other materials, including synthetic papers, co-joined structures such as pouches and probably the same will be said of bio-based and compostable materials when they become more widely available and acceptable.

Oriented polypropylene

(OPP) is a well-known and versatile material. It is strong, dimensionally stable and is suitable for applications that require a degree of permeability. Alternatively OPP can be engineered to provide the desired barrier resistance not only for many flexible packaging purposes but also for many industrial applications.

Specialization — the product, print and conversion of ultra-thin films for non-woven applications, the construction sector, scientific and technical, electronics and countless other areas of perhaps, low volume but high value — may well be the future for many films. ■

ABOUT THE AUTHOR

Tom Kerchiss is the chairman of sample preparation system and print/coat/laminating technology specialist for RK PrintCoat Instruments Ltd. The company, which won an Innovator in Pre-Press Award for the FlexiProof 100, supplies printing ink manufacturers, both large and small, as well as printers, converters and other businesses with color communication devices for all of the major print disciplines.

Advanced Solutions for Diverse Converting Needs

Catbridge Machinery, a leader in the converting industry, specializes in high-performance machinery catering to a variety of industries, from flexible packaging to nonwovens, paper to label stock and tape. Our expertise extends beyond slitter rewinders to developing comprehensive web converting systems for intricate processes like coating and laminating.

Diverse Machinery for Every Converting Need

At Catbridge Machinery, our extensive range of converting machines is designed to cater to the varied and evolving needs of the industry. We understand that each converting process is unique, and our diverse machinery lineup reflects this understanding.

• Comprehensive Range:

From duplex center winders and center surface winders to surface winders and advanced turret systems, our portfolio encompasses machines for every scale and type of converting operation.

• Versatility and Adaptability:

Each model in our lineup is engineered to handle a wide array of materials and applications. This versatility ensures that whether our clients are working with delicate films, heavy-duty paper, or specialized materials like nonwovens or building materials, we have a machine that can meet their needs.

• Innovation in Design:

Our machines are not only diverse but also feature the latest innovations in converting technology. We incorporate advanced features like precise tension control, efficient slitting mechanisms, and ergonomic designs to enhance productivity and ease of use.

• Tailored Solutions:

Recognizing that off-the-shelf solutions may not fit every requirement; our line of machines offers various configurations. This flexibility allows us to tailor our machines to the specific requirements of our clients, ensuring optimal performance and efficiency in their unique converting processes.

Unified Design and Manufacturing Excellence

Catbridge has invested significantly in machine tools, processes, and expertise, ensuring the



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Showcasing the 900MC:

A Paradigm of Versatility

Realizing the need for efficient yet straightforward solutions in the converting industry, Catbridge Machinery introduced the 900MC. This machine ingeniously combines the large-diameter capabilities of our traditional duplex rewinders with the operational efficiency of a turret system. Its design significantly reduces downtime between sets and increases productivity without the complexity usually associated with advanced machinery.

The 900MC stands as a symbol of Catbridge Machinery's dedication to innovation, efficiency, and user-centric design, embodying our deep understanding of the industry's evolving needs.

Comprehensive Machinery Range

From duplex center winders to advanced turret systems, our machinery portfolio is designed to meet diverse converting demands. Each slitter rewinder from Catbridge is a testament to our commitment to increasing efficiency, enhancing roll quality, minimizing waste, and integrating cutting-edge technology throughout the converting process.

Pioneering Converting Technology

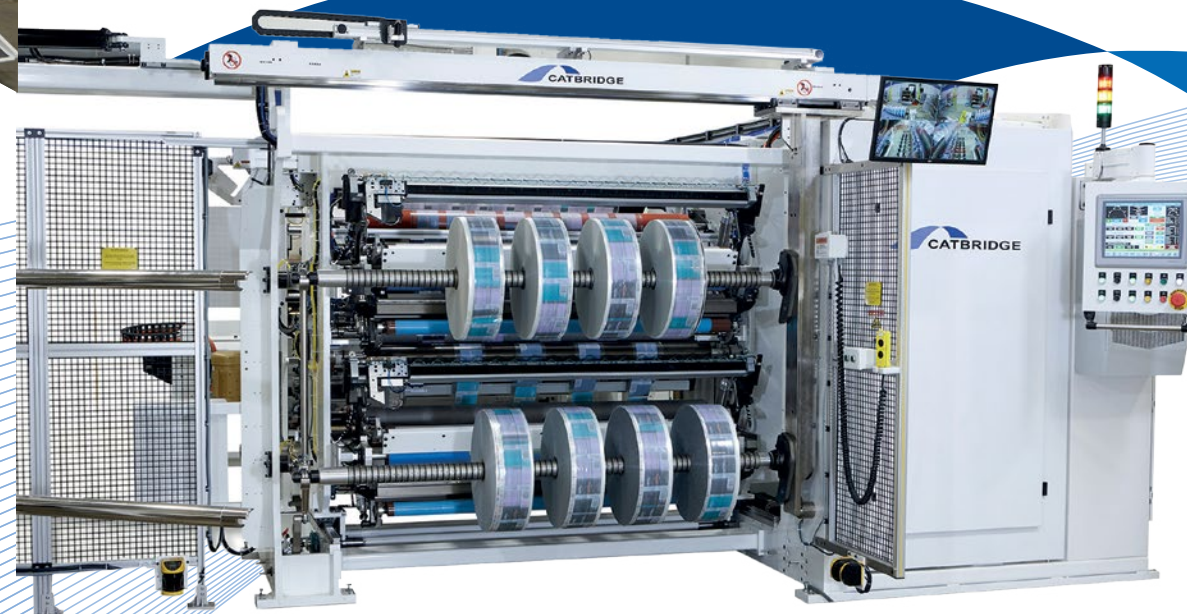
Catbridge Machinery stands as more than a manufacturer; we are a strategic partner committed to innovation and excellence. Our machines are at the forefront of industry advancement, offering not just equipment, but a partnership for continual success and growth in the converting industry.

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Pouches 101

Why Organizations Should Consider Alternatives to Traditional Packaging

By **Rob Tiller**, Managing Director, PennPac

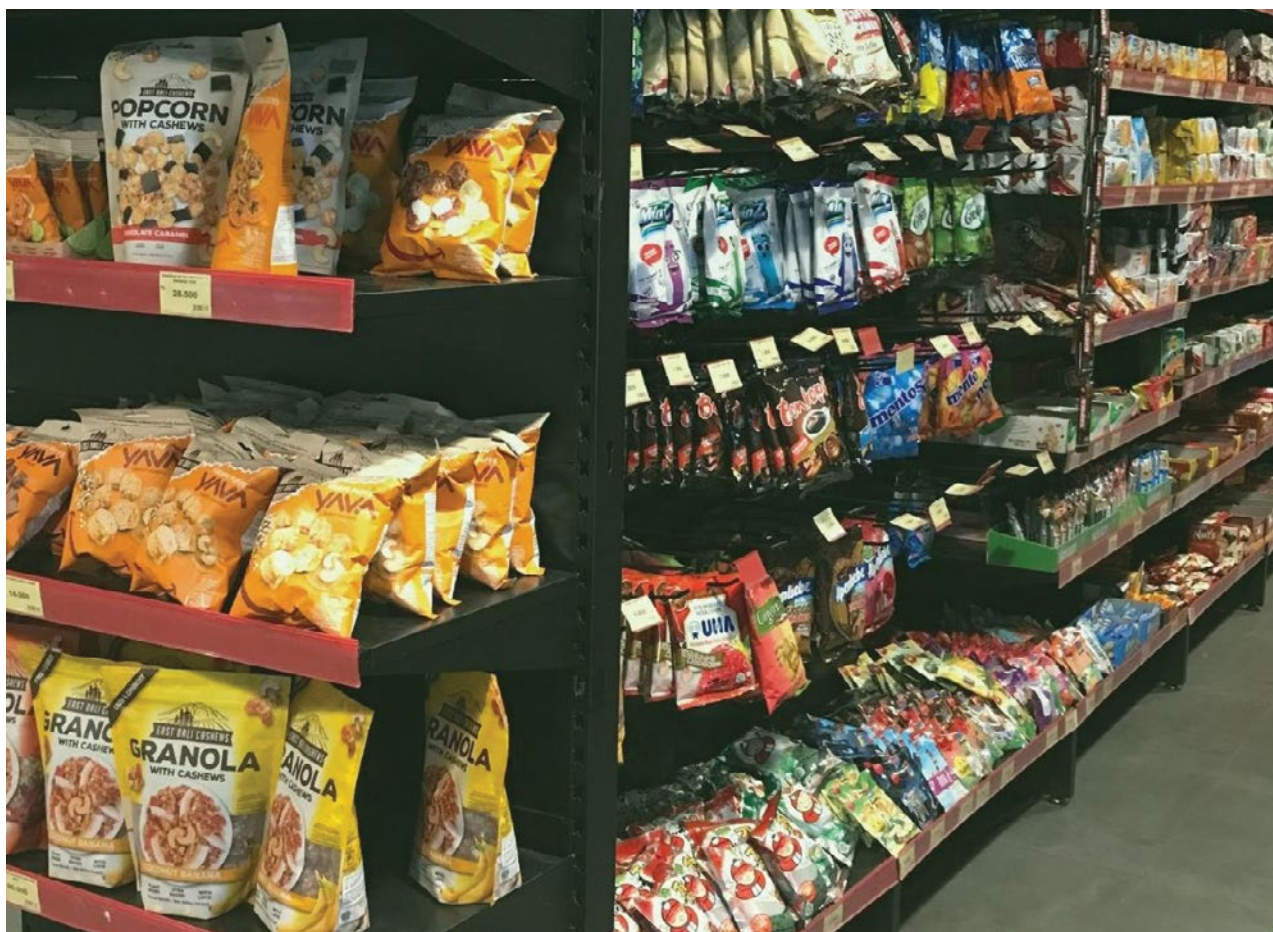
Continuing to expand in popularity, flexible stand-up bags and pouches are steadily evolving in all areas of consumable product markets (e.g., dry goods, liquids, powders). Having a strong foothold in the food industry, pouches are becoming a new retail standard. With high demand for packaged food products these days, pouches

have aided in significant logistical efficiency gains by changing the way we pack our semi-trailers. Essentially, allowing for more product per delivery due to a pouches' space-saving design feature(s).

With many pouch design variations made from materials like aluminum or multiple plastic layers such as polypropylene or

polyethylene, the typical stand-up bag or pouch is far more complex than what a consumer sees, regardless of what's inside. From logistical motives, to freshness concerns, to sustainability, the use of such packaging techniques is rapidly advancing across the globe.

Why is this, consumers might ask? Well, stand-up bags and



The benefits of stand-up pouches are stacking up against the competition. Photo courtesy of PennPac.

pouches are replacing traditional packaging for many reasons. This article will touch on just a few of the many topics surrounding the baseline reasoning for such a rapid departure from the traditional methods in food packaging.

Benefits

Here's an example many consumers can relate to — grab the recently purchased, sealed box of your favorite cookies or crackers out of the cupboard, eat a serving and then return to the cupboard until your next craving. Two to three days later, they just aren't the same, right?

A significant advantage of the stand-up bag or pouch is their well-engineered ability to keep food fresh for longer periods of time, even after being opened. Comprised of multiple layers of films laminated together, the barrier properties of pouches are far superior compared to traditional packaging designs. Add a resealable closure at the top and your favorite cracker or cookie is ready for multiple servings, in and out of the home. Pouches are designed specifically with re-use in mind, allowing the old-fashioned bag in a box to become a thing of the past.

What's more, the pouch minimizes both product and packaging damage (mostly from transportation handling) as well. Although crushed or torn boxes of cereal or crackers are still stocked on shelves, consumers are reluctant to place these in the cart. More often than not, many consumers reach past the ripped box, seen as defective, for a damage-free one. The pouch design decreases this activity, reducing the amount of no-sale food items.

Many brands continue

to successfully maintain their old-fashioned image and are hesitant to transition to a modernized pouch. Eco-friendly pressures will continue to influence and encourage change to more sustainable solutions. More and more companies are utilizing recycled materials in their packaging and marketing them to the public in a way that brings awareness to a more sustainable trade. Incorporating some Post-Industrial Material (pre-consumer material) in a pouch structure is a major marketing scheme that many manufacturing teams are deploying.

Pouches on the Go

In addition to being engineered to take food freshness to another level, pouches have inherent features that allow for versatility in when and where they can be consumed. Traditionally, one would have to open a large outer package, often paperboard, to reach into a secondary package containing the food product. These days, snacking “on the go” is easier than ever. The resealable pouch is now the primary package. Being lightweight and utilizing less space in your backpack, desk drawer or vehicle console, they can be consumed virtually anywhere with ease.

The bottom gusset allows the food product to stand upright without any support from surrounding objects. Some pouches are even designed with a built-in handle to make them easier to carry around. For liquids or powders, many pouches have incorporated a built-in spout to allow for an easy pour. The next time you are enjoying a product that is packed in a pouch, take a moment to study the features engineered to

make it more enjoyable!

The list of benefits goes on and on, most in favor of the stand-up pouch. Like anything, debate will always exist challenging which packaging methods are more economical, safe and aesthetically pleasing. However, one thing is for certain, engineering teams across many consumer markets are considering how a pouch may be beneficial to their organization, customer base, environment and bottom line. With pouches offering an all-in-one solution, cost savings and environmental impact are exponential.

If your organization is considering a pouch design, reach out to your film supplier of choice to discuss which barrier films will be your best fit for the application. ■

ABOUT THE AUTHOR

As Managing Director, Rob Tiller is flanked by a committed team with decades of flexible packaging film expertise. Together, they work to provide PennPac's customers and associates with a friendly and reliable experience. Converters and End-Users across North America trust PennPac's accommodating warehousing, custom slitting/re-winding and film solutions.

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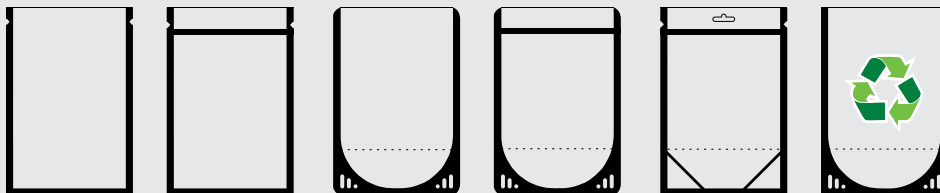
150 ppm
Mechanical speeds



~20 minute
changeovers



Recyclable
pouches



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Flint Group Provides Update on Effect of Developments in Red Sea

Flint Group, a leading supplier of inks and coatings to the print and packaging industries, comments on the escalating impact caused by shipping delays across trade routes in the Middle East.

Doug Aldred, Chief Commercial Officer at Flint Group, commented: “Consistent with many businesses, our global supply chain, transit times and costs have been impacted by developments in the Red Sea.

“The redirection of sea freight around the Cape of Good Hope, bypassing the Red Sea-Suez Canal route, is anticipated to lead to extended transit times, ranging from two to six weeks. These changes also affect other sea freight routes – notably transatlantic crossings – due to the limited availability of containers and ships.”

The company recognizes growing concerns related to container availability and substantial increases in sea freight container costs. Multiple sea freight carriers have introduced surcharges due to the requirement for vessels to re-route via the Cape of Good Hope, as opposed to utilizing the Red Sea-Suez Canal route. Flint Group continues to evaluate cost increases carefully and, where relevant, may evaluate the implementation of freight surcharges.

Arno de Groot, Vice President, Procurement at Flint Group further explained: “As a consequence of the reduction in the number of ships docking at Red Sea and Mediterranean ports, additional freight handling via



‘feeder trans-shipments’ have been necessary. This process involves collecting containers from smaller ports and transporting them to hubs for loading onto larger vessels, resulting in extensions to transit times of up to twenty-eight days. Finally, due to uncertain vessel schedules, ports elsewhere across the globe may encounter congestion.”

Mr. de Groot concluded: “Our global Procurement and Customer Service teams are working diligently to mitigate the impact of the current sea freight disruption by proactively tracking incoming materials, reviewing stock levels and adjusting the mode of transportation to recover delays. Our top priority is to

ensure customers have the inks and coatings required to run their sites smoothly. We will update our customers as the situation evolves and continue to do everything we can to minimise any adverse impacts.”

Flint Group will inform its valued customers of any potential impacts to existing and future orders. The company recommends that customers proactively plan stock levels in anticipation of increased lead times. Flint Group’s local sales and service teams stand ready to support.

Customers with questions or concerns regarding the ongoing situation and its impacts are encouraged to contact [info @flintgrp.com](mailto:info@flintgrp.com). ■



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IMS TECHNOLOGIES Slitting and Winding solutions

Who is IMS TECHNOLOGIES?

IMS TECHNOLOGIES is an international group born from the union of specialized, diversified companies operating in different sectors such as Converting, Packaging and other industries. Over the years, it expanded its portfolio, completed strategic acquisitions and embarked on a path of internationalization. The IMS TECHNOLOGIES name dates back to 2017, when the IMS Deltamatic company was acquired by the Coeclerici Group – a global leader in commodity supplies for the steel and chemical industries – and is aimed at emphasizing the important technical and technological know-how of the company.

The group operates three production facilities in Northern Italy, two in the province of Bergamo – in Calcinato and Seriate – and one in Casale Monferrato, in the province of Alessandria. In 2024, with a first expansion of Calcinato plant, the total production floor turned into 24,000 square meters dedicated to the production and assembly of high-tech machines.

The company consolidates its **global presence** with commercial and technical assistance offices in Germany, the U.S., China, and soon in India, highlighting IMS TECHNOLOGIES' commitment to providing timely support to customers worldwide.

The Group currently specializes in the production of machinery for slitting materials roll to roll, covering a wide range of applications from paper to aluminum, pressed tobacco to aseptic materials, and from wide-range plastic film to coils of flexible material for household use. Thanks to



IMS TECHNOLOGIES Hedquarter in Calcinato (BG) – Italy

an extensive portfolio, it can serve both the primary and the converting markets.

What is the competitive advantage that IMS TECHNOLOGIES offers its customers?

The production of machinery for extremely diverse applications requires specific technological expertise, and IMS TECHNOLOGIES excels in precisely this. The company boasts advanced skills in processing heterogeneous materials, allowing it to provide both standard and customized solutions to meet a wide range of needs.

Another key element of IMS TECHNOLOGIES' success lies in its ability to form teams composed of experts with diverse backgrounds and experiences. It is exactly this diversity that contributes to generating innovative perspectives and new approaches

in finding solutions for specific challenges and customer needs.

In this way, the company can present a unique and original offering to the market.

Who is the target customer of IMS TECHNOLOGIES?

IMS TECHNOLOGIES caters to a wide range of customers, including large multinational corporations – e.g. film producers or paper mills – seeking a partner capable of managing complex projects on an international scale. The client portfolio of IMS TECHNOLOGIES also encompasses converters with standard needs, showcasing the company's flexibility in meeting a variety of requirements. The ability to develop machines and solutions that can interpret a wide range of requests is undoubtedly one of the distinguishing elements of the company.

What developments does IMS TECHNOLOGIES intend to pursue to intercept the future of the converting market?

For 2024, IMS TECHNOLOGIES has identified India as a crucial first step in its expansion plan, having already established a solid presence through local agents and planning to further intensify it. The initial focus will be on the paper mills sector and the development of the paper business, leveraging the deep experience and accumulated know-how over the years.

Nevertheless, a key element of the strategy is the continuous attention to the film sector, both for primary producers and converters. This sector has already brought significant satisfaction in past years, and IMS TECHNOLOGIES aims to consolidate and expand its presence in this segment.

Another strategic aspect is the development of slitting and rewinding solutions for the non-woven industry, recognizing the importance and opportunities that this rapidly growing sector offers.

Diversification remains a priority, reflecting the company's long-term vision and its commitment to adapting to market dynamics.

To ensure the success of these initiatives, IMS TECHNOLOGIES will continue to rely on its global network of sales managers and expand its agent network. This proactive approach underscores the company's ongoing efforts to consolidate its global presence and capitalizing on emerging opportunities in various industry sectors.

At last, but not least, IMS TECHNOLOGIES is committed to creating cutting-edge, integrated solutions by actively collaborating with client partners

Diversification remains a priority, reflecting the company's long-term vision and its commitment to adapting to market dynamics.

to develop modular standard tools adaptable to specific needs. The focus is on analyzing machine performance through the MAIA industrial platform, based on the cloud. This platform enables users to collect, visualize, and analyze data on machines, providing valuable information for predictive maintenance.

By offering data for predictive maintenance, IMS TECHNOLOGIES contributes to providing a clear overview of production performance, with increasingly precise details on cost management. This approach reflects the Group's dedication to meeting the evolving needs and challenges of clients in the converting industry through integrated solutions and advanced technologies.

IMS TECHNOLOGIES AT A GLANCE

The IMS TECHNOLOGIES Group is an international standard-setter in the engineering and manufacturing of high-tech customized machinery in multiple sectors, including converting, packaging, and other industries.

IMS TECHNOLOGIES, with its long history reaching back to 1851, leverages extensive know-how and expertise to develop cutting-edge solutions adhering to the highest standards of productivity, quality, and precision. These

innovations are then brought to market through the group's internationally renowned brands.

The group's flagship brands, GOEBEL IMS and LAEM IMS, solidify its status as an international leader in developing converting machinery. GOEBEL IMS is renowned for its comprehensive range of slitter rewinders, un- and rewinders, as well as specialized machines. These cater to manufacturers and converters working with diverse materials such as paper and board, film, alufoil, and nonwoven. Meanwhile, LAEM IMS specializes in slitting and winding machinery tailored for the converting and flexible packaging industries. Noteworthy offerings include dual-shaft and high-productivity turret machines capable of processing a variety of materials.

In essence, IMS TECHNOLOGIES Group stands at the forefront of innovation, perfectly integrating a wealth of experience, cutting-edge technology, and a commitment to delivering unparalleled solutions to its global clientele through its distinguished brands.

Marino Ferrarese
Group Sales, Marketing
& Service Director
sales@imstechnologies.com

BOBST's innovations for flexible packaging

BOBST continues to make significant progress in addressing the challenges faced by the flexible packaging industry. The company has recently reached key milestones for long-term R&D projects, which are giving further strength and substance to the company's vision for the future of the packaging industry.

oneBARRIER and One Complete Solution address two important issues for the flexible packaging industry – the circular economy of packaging and the transformation of the production workflow.

Making recycle-ready flexible packaging a reality today with oneBARRIER

oneBARRIER is a family of new recycle-ready high-barrier substrates and sustainable solutions, developed by BOBST and its partners.

The validity and viability of the oneBARRIER substrates have been firmly established, having been tested by BOBST together with different ecosystems of leading industry partners. High and ultra-high barrier duplex and triplex substrates are now available for packaging designers to use as alternatives to non-recyclable metallized packaging.

oneBARRIER includes PrimeCycle solutions which are polymer-based mono-material substrates that are EVO and topcoat free, and FibreCycle solutions – fibre/paper-based mono-material structures coated with functional layers that can be recycled in the existing paper stream. Both are viable replacements for metallized polyester non-recyclable substrates.

oneBARRIER PrimeCycle PE AIOx mono-material has been certified by the German institute Cyclos-HTP. With a recyclability level of 98%, it exceeds industry guidelines, which is an extraordinary achievement for a high-barrier film.

The oneBARRIER FibreCycle AluBond structure has also been declared officially recyclable by Papiertechnische Stiftung (PTS), the German research institute of the



One complete solution EXPERT K5 vacuum metallizing and oneBARRIER expert coater for production of oneBARRIER PrimeCycle flexible packaging



oneBARRIER FibreCycle packaging, a fibre/paper-based mono-material flexible packaging structure that can be recycled in the existing paper stream.

paper industry, 4evergreen, Aticelca and Western Michigan University.

BOBST is working on other types of sustainable packaging, including compostable/bio-degradable solutions.

One complete solution: dedicated workflows for seamless quality production

Beyond the significant progress made in sustainable flexible packaging, BOBST also recently announced the launch of One Complete Solution. This comprises BOBST's portfolio of end-to-end workflows for seamless quality production: from application management guidance and production of functional substrates through to pre-press set-up, printing, converting, quality control, and services. As the needs

of converters become more unique due to diverse market factors, the One Complete Solution portfolio provides everything they require, tailored to their specific business model.

The One Complete Solution for oneBARRIER FibreCycle is a good example: it comprises the EXPERT K5 vacuum metallizer for deposition of AlOx or AluBond and the oneBARRIER MASTER COATER for the primer and top coating processes.

One Complete Solution includes other dedicated workflows that connect all steps, from production file and pre-press through to the reels of printed or laminated substrates. This has been made possible because BOBST is the only supplier in the industry that offers all such printing and converting technologies for the production of flexible packaging.

BOBST was recently recognized for its end-to-end solutions when receiving the sought-after Top Company to Watch Award at the Digital Packaging Summit 2023. The award was given after two leading European label printing companies – Geostick in Belgium and Germark in Spain – implemented All-in-One platforms from BOBST to optimize their production floor and explore new opportunities in a sustainable and productive way.

The Importance of Ink Troubleshooting on Press

A Q&A with **Moe Rahmeh**, Technical Customer Service Functional Excellence Director, Sun Chemical

What has Sun Chemical specifically done to help printers both troubleshoot and avoid press performance challenges?

Sun Chemical's experts work with printers during the entire span of the printing process and focus on preempting problems through proper training, planning and adhering to best practices. When issues do occur, Sun Chemical's team of experts has the experience to create specific solutions to help printers achieve customers' goals.

Sun Chemical has also created an ink troubleshooting guide¹ online, which provides

a list of common problems and tested solutions for a wide variety of printing processes. These solutions have been created by Sun Chemical's experts based on real troubleshooting printing issues across the globe.

When creating products for print, Sun Chemical considers the range of variables which can impact print quality, from environmental factors due to heat or humidity in certain regions, to components impacting varying press speeds. Acknowledging these factors proactively has enabled Sun Chemical to create inks, coatings and adhesives with solutions to problems already

built-in and designed to prevent issues from arising in the first place.

What steps can package printers take to minimize the impact of technical problems before they occur?

Because each customer requires a unique standard and speed for their print, printers should be careful to document customers' print requirements. Achieving an effective, issue-free print at a specified press speed requires printers to consider how each aspect of the printing process must be altered to account for the adjusted speed, from the anilox to the plates to the ink. Printers who communicate their print speed and product quality targets to their partners before and during the print process are best set up for a successful product outcome.

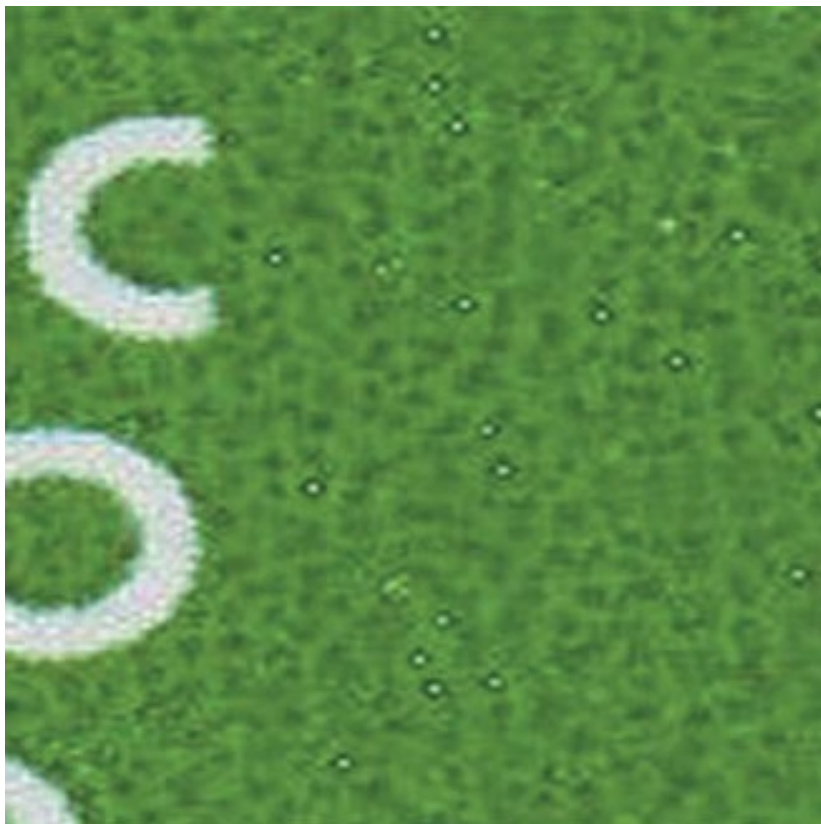
What are the most common problems printers encounter with each of the following packaging printing processes: Flexo, sheetfed, energy curable, gravure and paper packaging?

To meet demand, printers must produce higher quantities of product, requiring faster print speeds. Increasing print speeds, however, can often lead to ink-related issues which compromise the print quality.

In flexographic printing, printers often encounter ink smearing, as a result of speeding up the printing process without allowing each layer of ink to dry fully. To troubleshoot ink smearing, printers may need to



Flexographic - Smearing



Gravure - Volcanoes

analyze the press speed, reduce the ink viscosity or adjust the ink thickness to attain a clear print. Dirty print-dot bridging is another common problem in flexographic printing, which can result from excess air blowing on the anilox. This issue can be resolved by blocking or trapping the excess air or by balancing the dryers.

With sheetfed offset printing, piling can easily occur when the ink fountain is operating at the wrong temperature. Ink fountains should be set to 70 degrees Fahrenheit at minimum to create effective ink transfer. Another common issue with sheetfed printing is metering roller build-up, which can result from a contaminated fountain

solution circulation system. To remedy this build-up, printers should desensitize the rollers and fully empty and clean the filters before refilling them with new solution for a cleaner print.

Energy curable printing often presents issues with plate blinding, which can happen when plate cleaners haven't been properly removed. To avoid this, printers should limit the amount of plate cleaner they use, ensure a thorough rinse after applying the cleaner, and avoid allowing the cleaner to dry onto the plate. Ink that creates a mist as it comes off the rollers is another common problem with energy curable printing. Using an excess volume of ink can cause misting, so printers should run a thinner

ink film with a thicker ink to achieve their desired ink density without compromising the print.

Gravure printing can sometimes lead to ink mottling, which creates an uneven print appearance. Mottling may be caused by the ink picking up characteristics of a textured substrate, so printers should opt for a smoother substrate to avoid an uneven print. Gravure printers can also encounter small eruptions in the surface of the print, referred to as 'volcanoes'. Volcanoes may be brought on by high web heat which can vaporize certain solvents, so lowering the web temperature can minimize eruptions and maintain a smoother print.

For paper packaging, inconsistent print color can happen as a result of changes in viscosity, substrate, or ink or foam. To achieve consistent, effective print color, printers should monitor changes in viscosity by controlling the substrate, measuring and controlling additions to the ink, or adding defoamer.

Paper packaging printers can also run into the issue of weak print color, which can be brought on by a worn or dirty anilox roll that should be cleaned or replaced to create a print with bold color.

1 <https://inktsa.sunchemical.com/>

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