PRINTING UNITED EXPO

OPPORTUNITY POCKET GUIDE:

Flexible Packaging Printing

THE FLEXIBLE PACKAGING OPPORTUNITY

Flexible packaging is any type of non-rigid packaging, which is typically capable of expanding when filled and can adjust its shape. It can be constructed from paper, film, foil, or any combination of these materials.

The most common forms of flexible packaging are pouches, bags, and other pliable product containers. Common examples of flexible packaging include juice pouches, potato chip bags, and resealable candy bags.

MARKET SIZE

According to the Flexible Packaging Association, flexible packaging is the second largest packaging segment in the U.S., garnering about 20% of the $195 billion U.S. packaging market.

One reason flexible packaging is a fast-growing packaging segment is that it adds value and marketability to food and non-food products alike – combining the best qualities of plastic, film, paper, and aluminum foil to deliver a broad range of protective properties while using a minimum amount of material to create the package.

The food market is predominant in flexible packaging, accounting for 48% of flexible packaging sales, according to the FPA. Because of the prevalence of flexible food packaging, print providers offering these applications are subject to all laws and restrictions of food industry regulations, including those governed by the U.S. Food and Drug Administration (FDA) and within the FDA, Good Manufacturing Practices (GMP).

TYPES OF FLEXIBLE PACKAGING

Flexible packaging is available in a variety of materials, shapes, and sizes, and is typically produced in either formed or unformed constructions. Formed flexible packaging is pre-shaped and offers customers the option of filling it, while unformed products are typically printed on a roll and sent to customers to form and fill. The materials used in flexible packaging can be manipulated and combined to create the following types of products:

- **Bags**
- **Pouches** — small bags usually constructed by sealing one or two flat sheets along the edges.
- **Sachets** — smaller sized pouches.
- **Rollstock** — printed and laminated flexible packaging film that is wound up in roll form. All flexible packaging products—whether pouches, bags, snack bar wrappers, etc.—are in rollstock form at some point. Customers with in-house form, fill, and seal (FFS) processes will procure their flexible packaging in rollstock form.
- **Lids** — for products made from film, paper, and foil.
- **Shrink sleeves** — a printed piece of plastic, unsupported by a liner or an adhesive, is placed around a container, seamed, and heated to a temperature that will cause the film to shrink to the exact geometry of the container. Shrink sleeves can be classified as a label, flexible packaging, or as their own packaging category.

KEY USER MARKETS

Flexible packaging is used across several industries, but especially in these markets:

- Food and Beverage
- Medical Devices
- Pet Food and Treats
- Health and Beauty
- Consumer Product Goods (CPG)

ENTRY INTO THE SEGMENT

The majority of flexible packaging is mass produced using flexographic or rotogravure printing. The volume of digitally printed flexible packaging is small (less than 1%) compared to analog processes, but its prevalence is growing. The majority of digitally printed flexible packaging is printed on liquid electrophotography presses, but more solutions are coming online spanning dry toner and (aqueous) inkjet options.

EQUIPMENT POINTS OF ENTRY

Electrophotography Web Presses

- Web width of 14" to 19.9"
- Web width of 20" to 29"
- Web width of more than 29"

Aqueous Inkjet Presses

- Web width more than 15"

Hybrid Inkjet/Flexography

- This combination of processes offers the benefits of both digital printing and flexography.

Flexography

- Narrow-web flexography (under 20")
- Mid-web flexography (greater than 20" but less than 40")
- Wide-web flexography (more than 40")

Web Offset

Screen Printing (flatbed or rotary)

Gravure

SUBSTRATES

Producing flexible packaging requires familiarity with the types of substrates used in the process. A wide range of materials that include polymer films, paper, metallic foil, cellulosic and bioplastic films are used to create flexible packaging.

Many factors influence the selection of the substrates that best suit the product to be packaged. These include the layer role in package construction, mechanical strength, barrier, printing, heat resistance, sealing parameters, visual appearance, recyclability, cost, etc.

FINISHING

When making the move into flexible packaging, the finishing and converting components of the production process should not be overlooked. While the latest digital print technologies have lowered the barriers to entry into flexible packaging, without the proper finishing capabilities, the distinct advantages that these applications provide cannot be achieved. Processes such as lamination, diecutting, and pouch making are all key components to the production of a strong flexible package. Before making the move into this segment, it is important to understand the specific applications your customers may need and their end use. Printers that are armed with this knowledge will then be better suited to discuss their specific finishing needs with vendors.

BEST PRACTICE TIPS

- Start with existing clients. Review client lists and determine if they use flexible packaging or could benefit from using flexible packaging.
- Ask current clients that use flexible packaging about their requirements.
- Consider outsourcing before bringing in-house.
- Learn the distinct advantages of flexible packaging spanning sustainability, convenience, portability, and food safety and preservation.
- Given the complexity of these applications, do not overlook finishing.
- Monitor and understand relevant food safety regulations.
- Use the resources of associations serving flexible packaging printers.
- Read packaging industry publications, including *Packaging Impressions* (www.packagingimpressions.com).
- Visit flexible packaging suppliers at the PRINTING United Expo.

LEARN MORE ON THE SHOW FLOOR*

*List may not include all related exhibitors. For a full list, download the PRINTING United Expo mobile app.

About Flexible Packaging

- Label & Packaging Community Hub — B623
- Flexible Packaging Association (FPA) — B718
- Foil & Specialty Effects Association (FSEA) — B621
- TLMI — B720

Printing Equipment

- Fujifilm — B2506
- GSI – Graphic Solid Inks — B633
- PCMC/BW Converting Solutions — B2219
- Screen — B2544
- Xeikon — B14057

Prepress/Platemaking

- Anderson & Vreeland — B16063
- Fujifilm — B2506

Substrates

- GPA Fedrigoni Specialty Substrates — B9079
- Neenah — C3253
- UPM Raflatac — B18053

Finishing

- Advanced Greig Laminators — B10033
- Bobst — B17059
- GSI – Graphic Solid Inks — B633
- Heidelberg-Gallus — B13033
- Kurz — B16045
- PCMC/BW Converting Solutions — B2219
- TRESU Americas — B951