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Sustainability requires flexible packaging concepts



Contemporary packaging innovations

Elopak offers aseptic packaging systems that combine ecological advantages with technological flexibility

| Aseptic Packaging | Ecological Advantages | Elopak | Innovations | Technological Flexibility |



Fig. 1: Environmentally conscious consumers are specifically looking for packaging that fits their lifestyles and beliefs. © all Elopak

Manufacturers of aseptically filled juices and other beverages face the challenge of producing their products as sustainably as possible, while also achieving market credibility. For successful positioning, products must therefore promise packaging that meets the highest ecological requirements, together with filling systems that offer sufficient flexibility for dynamic markets. Here, Pure-Pak® beverage cartons and filling lines from Elopak tick every box.

Consumers demand sustainability

According to last year's Statista report, around half of Germans say they have changed or adapted their consumer behaviour for reasons of sustainability. This includes trying out new products and shops, as well as being willing to spend more money on sustainable products. In addition, consumers are willing to do without products and pack types that do not meet sustainability standards: More than a quarter have already stopped buying certain products. In the case of food and beverages, around 30 per cent cite sustainability as an important factor in their purchasing decisions.

"In the area of aseptically filled products, we are noticing that something is clearly changing right now," explains Michael Oppenheimer, Manager Market Unit Elopak Germany. "Numerous fruit juice manufacturers and dairies

with whom we cooperate are currently expanding their portfolios to include vegan or other sustainably positioned solutions, and are enriching the market with innovative products."

Ecologically convincing

The central challenge is for such products to meet the same requirements as conventional beverages in terms of quality, choice and taste. Consumers with high ecological awareness now have extremely heterogeneous demands – for example, in terms of purchasing power, shopping preferences and personal tastes – which manufacturers must match with a variety of suitable options. This requires a packaging concept that offers sufficient flexibility in terms of shapes, sizes, filling goods and customisation options, and, at the same time, convinces with ecological advantages.

Oppenheimer adds: "As highly recyclable packaging that is largely made of renewable raw materials, our Pure-Pak® beverage carton fits in well with the high ecological demands of many consumers. Manufacturers, meanwhile, benefit from a wide product variety and an aseptic filling system that offers the necessary adaptability even in dynamic markets."



Fig. 2: Coming to stay: Tethered caps will become the norm by July 2024 at the latest.

Tethered caps reduce littering

From July 2024, all beverage producers will be required to use tethered caps on their beverage containers. With Pure-TwistFlip™, Elopak offers closures that remain reliably connected to the packaging throughout their use. This ensures proper disposal of the caps and means the cartons can be recycled including the closure. It is also Elopak's lightest screw cap to date. This further reduces plastic consumption without compromising convenience or product integrity. The new closure variants are compatible with all Pure-Pak® beverage cartons. The first of these closures with a practical twist-flip mechanism are already on the market for chilled beverages.



Fig. 3: By eliminating the aluminium barrier, the carbon footprint of Pure-Pak® eSense is reduced by approximately 30% compared to a conventional aseptic Pure-Pak® carton.

Visual appeal

In 2017, Elopak became the first manufacturer to offer beverage cartons with Natural Brown board. These naturally brown Pure-Pak® cartons are fully recyclable and have a lower carbon footprint than conventional white cartons due to the elimination of both the usual white coating and the bleaching process. Their authentic, natural look makes it easy for consumers to recognise them as sustainable packaging. In the meantime, many brands have switched to this packaging solution for chilled and

non-chilled distribution to meet growing consumer interest in environmentally friendly products.

Aluminium-free packaging

Elopak's Pure-Pak® eSense packaging has also recently become available. This carton has no aluminium barrier and yet still meets all the requirements for aseptic filling and a long shelf life outside the cold chain. Replacing the aluminium barrier is a blend of polyolefins, which reduces the CO₂ footprint by about 30 per cent compared to a



Fig. 4: The E-PS120A aseptic filling line makes it easy for manufacturers to respond to the diverse demands of heterogeneous target groups with different packaging solutions



Fig. 5: The optional combi-filler of the E-PS120A allows many different products to be filled on the same machine – including high-viscosity liquids such as smoothies or drinks with fruit particles.

conventional aseptic Pure-Pak® carton. Renewable plastic based on tall oil, a residue from pulp production, can also be used for the new barrier. Compared to a standard carton, the CO₂ footprint is thus reduced by up to 50 per cent overall. At the same time, the new composite material is easy to recycle. The new aluminium-free carton is available in several sizes and with a range of aseptic closures.

Flexible and efficient

Variety and new possibilities in packaging create greater customisation and differentiation opportunities for brands. However, manufacturers must always ask themselves whether new packaging options will work technologically on existing filling lines – without the need for major conversion measures or investment in new lines. Elopak offers filling systems from a single source that are precisely matched to each other and also highly flexible.

The E-PS120A aseptic filling line makes it easy for manufacturers to respond to the diverse demands of heterogeneous target groups with different packaging solutions. In addition to the popular one-litre version, it can also be used to fill 750 and 500 ml cartons. Switching between the different sizes, carton designs and board qualities is uncomplicated and can be done within minutes.

Upgrade sets offer added value: the optional combi-filler allows many different products to be filled on the same machine – including high-viscosity liquids such as smoothies, gazpacho, passata and even puddings and drinks containing fruit particles. This makes it easy for manufacturers to expand into new product segments.

A real unique selling point in the market is the option of using two different closure sizes on the E-PS120A. In addition to the small Pure-Twist U, the larger Pure-Twist O can also be utilized after a short conversion time.

Ultrasonic sealing as standard

The latest generation of the E-PS120A uses a sealing technology that can handle not only conventional composite materials but also the aluminium-free aseptic carton Pure-Pak® eSense. In contrast to the previous inductive sealing process, the new hybrid machines operate with ultrasonic sealing.

“We know that consumer demands can be hugely dynamic. Therefore, we want to offer our customers packaging solutions that are as versatile as possible, but still user-friendly, in order to keep pace with this,” says Wolfgang Buchkremer, Chief Technology Officer Innovation & Engineering at Elopak. “At the same time, our technical staff stay close to our customers so that we can monitor change processes and sustainably positioned product range expansions on site if necessary, and make them as simple as possible for our customers. This could include a switch to our tethered caps, aluminium-free cartons or paper-based opening solutions.”

Elopak SE

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