

SUSTAINABILITY HIGHLIGHT: PAPER BOTTLE TAKE OVER

Paper bottles lead the way in sustainable packaging.



Paper Bottle for Wine

With the launch of its 3Q Sangiovese red Italian wine, Italian vineyard Cantina Goccia is the first to commercialize an innovative new paper bottle.

By Pat Reynolds

he 750-mL Frugal Bottle is made from 94% recycled paperboard that is assembled around a food-grade liner to hold the wine or spirit. The liner is described as similar to what might be used in a bag-in-box wine. The threaded closure is aluminum and the neck finish appears to be a rigid plastic.

The Frugal Bottle, which is comparable in cost to a labelled glass bottle, is the brainchild of British sustainable packaging firm Frugalpac, which creates and supplies recycled paper-based products with the lowest carbon footprint that are easily recycled again so they don't need to go to landfill. The Frugal Bottles for this particular wine are made at Frugalpac's facility in Ipswich, England, and sent to Cantina Goccia for filling. But Frugalpac's longterm plan is to put bottle-making machines into wineries or into contract filling facilities where multiple wine brands are filled. One Frugalpac machine can produce 620 bottles/hr.

Presumably, the paperboard is fed into the bottle-making machine in the form of flat blanks already printed by a converter. Weighing just 83 g, the

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paper bottle is up to five times lighter than a comparable glass bottle. An independent Life Cycle Analysis by Intertek found the bottle has a carbon footprint up to six times smaller than a glass bottle and more than a third less than a bottle made from 100% recycled plastic. Consumers can recycle it by separating the plastic liner from the paper bottle and putting both components in their proper recycling bins. Frugal Bottle also notes that the whole bottle can be put into the paper recycling bin and the liner will be easily separated in the re-pulping process. Using up to 77% less plastic than a plastic bottle, the Frugal Bottle also stands out because it allows for 360-degree branding across the entire bottle.

The Cantina Goccia Frugal Bottle will initially be available for purchase online from the winery and in Scotland from Woodwinters Wines & Whiskies retail stores and online. The Frugal Bottle is also under active consideration by a number of leading UK supermarket chains and hospitality groups keen to promote sustainable packaging. It will be available from other retail outlets across the UK, Denmark, and Holland over the next few weeks.

Ceri Parke, owner of Cantina Goccia, describes this container as "the most sustainable wine bottle in



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the world." She continues: "The Frugal Bottle is about achieving a considerably more sustainable form of packaging for an industry crying out for innovation. When some of our top hotel customers saw samples of it, there was no hesitation in their minds that this type of bottle would be well received in their dining rooms. The launch of the Frugal Bottle is a big leap in sustainability without compromising wine quality. It's much lighter than glass, easier to transport, and friendlier to the planet. Just as important, our wine still tastes as wonderful in a paper bottle as it does in glass. We passionately believe this is a real game changer for the wine industry, allowing us to sell and transport our award-winning wines in a much more sustainable way whilst still providing a beautiful bottle."

Paper Bottle for Diageo Spirits

For Spring of 2021, London-based Diageo plans a limited release of Johnnie Walker Scotch Whisky in what it calls "the world's first ever 100% plastic free paper-based spirits bottle, made entirely from sustainably sourced wood."

By Pat Reynolds

ot available just yet are details on bottle size, method of decoration, type of closure, moisture resistance properties, or the cost of the container relative to glass or plastic alternatives. What Diageo does say is that the bottles will be formed by pressurizing pulp in molds using highly advanced technology. The pulp containers are then cured in microwave ovens before being sprayed internally with specialized coatings designed to be compatible with the products they are holding. Diageo says the bottle will provide at least a 12-month shelf life and the cost to the consumer will be competitive within the Johnnie Walker portfolio.

Diageo is also announcing that it has launched a new partnership with Pilot Lite, a venture management company, to launch Pulpex Limited, a new sustainable packaging technology company. To ensure that the technology can be used in every area of life, Pulpex Limited has established a partner

Paper Bottle for Diageo Spirits

consortium of world leading Consumer Packaged Goods companies in non-competing categories, including Unilever and PepsiCo, with further partners expected to be announced later in the year. The consortium partners are each expecting to launch their own branded paper bottles, based on Pulpex Limited's design and technology, in 2021.

Pulpex Limited has developed a "first-of-its-kind" scalable paper-based bottle designed and developed to be 100% plastic-free and expected to be fully recyclable. The bottle is made from sustainably sourced pulp to meet foodsafe standards and will be fully recyclable in standard waste streams.based coolants are more prone to causing freeze damage initially and then inadequate cooling after they melt. The newly introduced reusable coolant packs provided more uniform cooling.

"We're proud to have created this world first," says Ewan Andrew, Chief Sustainability Officer, Diageo PLC. "We are constantly striving to push the boundaries within sustainable packaging and this bottle has the potential to be truly ground-breaking. It feels fitting that we should launch it with Johnnie Walker, a brand that has often led the way in innovation throughout its 200 years existence."

Richard Slater, Chief R&D Officer at UK-based Unilever,

Diageo plans to test this paper bottle for Johnny Walker Scotch Whiskey in Spring of 2021.



Paper Bottle for Diageo Spirits

has this to say about the Pulpex Limited development: "We believe in tackling plastic waste through innovation and collaboration. We are going to halve our use of virgin plastic at Unilever, reducing our use of plastic packaging by more than 100,000 tons in the next five years. Joining forces to develop and test paper bottles is an incredibly exciting step forward, and we're delighted to be working together to tackle one of the biggest environmental challenges of our time."

Simon Lowden, Chief Sustainability Officer at Purchase, NY-based PepsiCo, is equally bullish: "Innovative solutions and partnerships are critical to driving meaningful progress toward a circular economy. The Pulpex consortium is well positioned to deliver sustainable packaging at scale and across industries, having impact beyond what any organization could achieve alone. We're proud to be a part of it."

"We're thrilled to be working with global brand leaders in this consortium," adds Sandy Westwater, Pilot Lite Director. "By working together, we can use the collective power of the brands to help minimize the environmental footprint of packaging by changing manufacturing and consumer behaviors."

When this CEO learned of a paper bottle that would both differentiate his new line of household cleaners and be more sustainable, he had to have it for the launch.

By Pat Reynolds

ocated in the north of France just outside the city of Lille, CBS Products is a wholesaler of household cleaning products. PET had been the container of choice for most of the 10 years the firm has been in business. But when Les Secrets de Leontine, a new line of products made from 100% natural ingredients, went into development, CBS CEO Gregory Dubos was determined to put them in packaging that would make them stand out and that would be more environmentally friendly than plastic. So when the new line reached store shelves earlier this year, it did so in paper bottles from Ecologic Brands.

"When I first saw this package I immediately had to learn more," says Dubos. "It's revolutionary."

His enthusiasm led to a series of conversations with Ecologic CEO and Founder Julie Corbett, which in turn led to CBS becoming a user of the Eco.Bottle, described by Ecologic as "the world's only commercially-viable paper bottle made from recycled materials."

Like other containers made by Ecologic, the bottle for CBS consists of two molded pulp shells held together by interlocking tabs plus a thin extrusion blow molded liner that is fully recyclable and is made of 80% post-consumer HDPE. Other components include a band of tape that goes around the neck of the bottle to help keep the interlocked shells together. The tape also adds top-load strength and keeps the injection-molded neck finish in a fixed position when the threaded closure is torqued on.

The ultimate goal underpinning the whole Ecologic premise is to be able to one day ship nested shells to regions around the world where blow-molding of the inner liner would also be

done. This would greatly optimize the sustainability of the container because then, rather than shipping empty bottles to its customer base, Ecologic could have the bottles efficiently assembled in locations relatively close to its brand owner customers. But Corbett says this regional approach to assembly isn't possible because the highly specialized automated equipment currently used to assemble the bottles only exists, at this point in



time, in Ecologic's Manteca, Calif., facility.

So the CBS bottles are shipped in sea containers to the French contract manufacturer that CBS relies on. There the bottles are filled and an injection-molded threaded polypropylene closure is applied, as is a glue-applied paper label that is FSC-certified.

"One nice thing about the trigger sprayer is that it's 100% plastic," says Dubos. "Usually there's a metal component, typically a spring, but this trigger sprayer is 100% plastic and 100% recyclable." The sprayer is supplied by Guala.

Room for improvement

One aspect of current production where Dubos would like to see progress is throughput. "The packaging is all semiautomatic, so we can't really fill more than about 2,000 bottles a day," says Dubos. "That's one place where we need to make some improvements, because we're struggling to keep up with demand from retailers. Not because it takes time to receive bottles from Ecologic, but because the filling and capping is too slow."

Retailers carrying the bottle include the well known and well established Carrefour chain, one of the largest in France. All bottles hold 480 mL, and the consumer pays anywhere from \$4.70 to \$7.00.

As for the cost of the bottles themselves, Dubos says it's twice the price of a comparable PET bottle. But CBS is able to charge a premium price for the products in the new line. "Consumers are well aware of what's going on with plastic in the ocean, so they are more than willing to pay a premium for a paper bottle," says Dubos.

He adds that the label includes messaging about how to recycle the components of the bottle. "The cap, the trigger spray, and the inner liner we indicate can be placed in the regular household recycle bins. The paper bottle, which is easily separated into two at its interlocking tabs, is 100% paper, so it fits right in with the paper recycle stream or it can be composted." Ecologic's Corbett points out that the Eco.Bottle has passed the ASTM 6868 composting standard.

Like Corbett, Dubos would also love to see bottle assembly done locally. "That would be my dream," he says. "But the capital investment required to make that happen is significant." Also like Corbett, he believes that one day bottle assembly on a local

basis will in fact be in place. In the meantime, he believes this is the kind of bottle that the world needs more of.

"In its first life it's a corrugated case," he notes, referring to the fact that Ecologic makes the paper shells from corrugated waste. "In its second life, it's a bottle. And it could even have a third life if you choose to use it for starting seeds the way L'Oreal does with its Seed Phytonutrient brand." (For a fuller description of this, go to pwgo.to/5763.)



Paper bottle requires just 5 g of plastic, 75% of the materials used are made from renewable resources and are compostable, and the five parts of the pack separate easily for recycling.

By Pat Reynolds

rom Carlsberg to L'Oreal to Nestle Purina to Seventh Generation, the idea of a paper bottle has drawn tremendous interest from a range of Consumer Packaged Goods companies. The latest entry, from 3Epack Ltd., takes a decidedly minimalist approach. In fact, once the various components are separated, it's remarkable just how flimsy this 3EpakR package is. But that's the whole idea. Because in this case it's flimsiness that makes this packaging concept potentially so environmentally robust.

According to Todor Saslekov, the founder and CEO of 3Epack Ltd, three main innovations drive this development:

1. A novel structure

- 2. A gas-barrier film that extends shelf life
- 3. A prototype production line that proves methods and the production process

"The key question behind this development has always been what will make the biggest impact in terms of pollution reduction?" says Saslekov. "There are a lot of solutions out there, but once you begin to measure their global impact, you start finding flaws. To truly have a meaningful impact, we don't need zeropollution packaging that only a few people can use. We need packages that, even if they are imperfect, millions can use. That's how you have an impact. And if millions are going to use such packaging, it has to be inexpensive. So we drove toward the development of a container and a technology that would minimize package cost while having the greatest possible impact on the environment."

This bottle can be used for a range of noncarbonated beverages in volumes up to 20 oz. Saslekov claims it offers the best combination of low cost, less waste, extended shelf life, recyclability, biodegradability, and compostability. Here are the key metrics he claims:

- 75% compostable under natural conditions
- up to 75% less plastic than plastic bottles
- 75% of materials used are made from renewable resources



- Use of this package can reduce cost by up to 55%
- Materials used are 100% recyclable in standard facilities

Before plunging into the makeup of this container and the technology behind it, it's important to elaborate a little on item number three above: the prototype production line. Like other inventors of new packaging technology whose concepts are potentially transformational, the principals of 3Epack Ltd. recognized that they had to actually launch a commercially available product to have any hope of proving that their concept was viable. The obvious facility to produce this new product was Toshitomo Co., a water bottling company in Dolnia Bania, Bulgaria, that is 40% owned by Saslekov. The firm supplies mineral water in 19-L (5-gal) reusable PET containers. Since 2018, Toshitomo is also making available MyEcoChoiceR beverages, including flavored waters and iced teas. All are in the 3Epak format, and consumers purchase them online in minimum order quantities of three 12-count shrink-wrapped units.

Container composition

So what is this unusual container made of? Not counting a straw that is automatically attached to each container, there are five parts:

- A body made of standard paperboard carton stock
- A double-wall corrugated bottom
- A top thermoformed from polystyrene

- A multilayer high-gas-barrier bag that holds the liquid
- A polyolefin shrink outer wrap

Central to the entire concept is that once the container's contents are consumed, it's easy to separate paper from plastic and put each component in the appropriate recycle stream. "This is where we think we have a decided advantage over aseptic drink boxes," says Saslekov. "Aside from the use of some biodegradable glue to create a side seam on the paperboard body, we don't bond the components together. That's why the outer wrap plays such

an important role. First, it protects the uncoated paper from water and humidity. More important, it keeps all the other components together in a strong and durable configuration that readily withstands the rigors of transportation and usage." The package even has this message printed prominently on the paperboard sidewall: "Do not remove wrapper before drinking."

Equally crucial in developing this paper bottle was the gas-barrier inner bag. "It took 18 months of research



and development," says Saslekov. "First, we needed a film that can hold different types of liquids—teas, juices, flavored water. It also needed oxygen barrier properties to extend product shelf life and had to be strong enough to withstand the impact of being dropped. Plus it had to be easy to puncture with a straw and be suitable for being formed, filled, and sealed on fairly standard vertical form/fill/seal equipment. The exact formula is proprietary and patent-pending, but the layers in the coextrusion are LLDPE/LLDPE/tie/EVOH/ tie/LLDPE/LLDPE."

Saslekov says the oxygen transmission rate (OTR) of this seven-layer coextrusion is 2.77 cc/m2/24 hr. He admits a typical aseptic carton comprising seven layers, one of which is aluminum foil, has a considerably better OTR of 0.2 cc compared to 2.77 cc. But not only is the cost of such a carton much higher, there's also the difficulty of separating the layers when it comes time for recycling. As for other popular containers and their oxygen transmission rates, he lists "thick" PET bottles at about 75 cc, "thin" PET bottles commonly used for bottled water at about 350 cc, and three-layer aseptic cartons at about 850 cc.

PET bottles could be made with much better gas barrier properties, but it would require adding EVOH, and doing that couldn't be justified from a cost perspective. "The general rule of thumb is that you need to substitute 10% of the bottle weight with EVOH," he points out. "For a standard PET bottle weighing 22 g, you'd need 2.2 g of EVOH. Our pouch weight is only 2 g, so we only need 0.2 g of EVOH. That's where our cost advantage comes in."

Pleased as he is with the development of the high-gas-barrier bag material,

Saslekov hastens to point out that customers who choose to use the package for water may opt for a standard PE film.

Material component suppliers could vary widely

When asked to identify the suppliers of the packaging components, Saslekov says that with the exception of the proprietary coextruded inner film, any number of suppliers can be used. One particular film producer is supplying the coextruded rollstock currently, but suppliers in Europe and the U.S. are being contacted now. Says Saslekov, "I don't think film suppliers will be too difficult to find. The same is true for the paper

bodies, the corrugated base, and the thermoformed lids. That was really one of the main goals—to eliminate the lengthy and expensive transportation of materials and components." Saskelov adds that beverage producers who install the 3Epak system "are not required to buy our materials. But we will compete on equal footing for their components business."

He also emphasizes this: "Remember, we are not trying to become a bottling company and



excel in the consumer products business with this development. We want to sell or licence our technology to strategic partners. In the future, customers who decide to use our technology can buy their own components from whoever they like. This should reduce cost and facilitate global implementation."

As for item number 3 above, the equipment doing the forming and filling, Saslekov says this: "The prototype line was developed by us, including the v/f/f/s machine, so that we could prove out our concept on a commercial basis and get bottles into the hands of consumers. The separate modules have been produced in different factories in China and then shipped to Bulgaria, where they were assembled and fine-tuned. But this is not a commercial line ready for prime time production. We hope to find a strategic partner with whom we can bring our technology to the next level."

The layout of the prototype line is shown in a line drawing included in this story. The UHT pasteurizing equipment shown at the beginning is not something provided by 3EPack and is included primarily for purposes of illustration. "Many customers already have a pasteurizer, and keep in mind that those who use the package for water won't need a pasteurizer at all," says Saslekov.

Starts with film unwind

A quick look at the equipment in action is available here. Film is unwound into an aseptic vf/f/s system, which incorporates a "patent-pending film sterilization process." Essentially it's an application of a 3% hydrogen peroxide solution plus exposure to UVC light. Commonly used to decontaminate surgical instruments,

UVC light has a wavelength of between 200 to 400 nanometers and is effective at killing bacteria by destroying the molecular bonds that hold their DNA together. Filled pouches move then to an assembly module that relies to a great extent on an oval-shaped track around which stainless steel molds continuously travel. These molds stop at various stations so that a number of automated processes can take place.

First, vacuum cups pick a flat paperboard body from a magazine feed, erect it, and pull it into a mold. The mold closes and moves along its ovalshaped track to a station where the two arms of a pick-and-place device alternate in picking an octagonal-

shaped corrugated base and placing it into a body. The bases are delivered by way of a rotary-style hopper that separates, sorts, and feeds them into two parallel discharge lanes leading to the station where they get picked and inserted into the body. The corrugated base is supported by the bottom flaps of the body.

Now the mold moves to the next station: pouch insertion. The beverage-filled pouches are conveyed up a short incline conveyor and



drop into a chute that delivers each pouch into a mold. In the next station, mechanical fingers smooth the pouch's top corners out over the body's edges. In the next station, the thermoformed lids—which, much like the corrugated bases, are separated, sorted, and delivered to the assembly module in two parallel lanes by a rotary-style hopper—are applied by the two arms of a pick-and-place device that also resembles the one responsible for applying corrugated bases. The lids are pressed down to firmly pinch the pouch's corners against the paperboard body. If any process is defective, electronic sensors notify the operator and that unit is automatically ejected.

The assembled container exits the assembly module and enters a flow wrapper and shrink tunnel. Just ahead of the flow wrapper, a Markoprint XIJET digital thermal ink-jet printer from Weber Marking Systems puts date and lot code on each body. As containers exit the shrink tunnel, a wrapped straw is automatically applied to the shrink wrap.

"For more than two years we've been looking for a company able to produce the U-shaped biodegradable straws from PLA," says Saslekov. "Finally we found Matrix Pack, a producer in Greece. We're also looking for a source that can thermoform our lid from PLA. Again, we have found some who can make it. But the minimum order is currently a barrier."

In some ways the genius of a concept like this is that multiple bets are covered where sustainability is concerned. If consumers behave responsibly, 100% of the materials in the container will be recycled. Enormously helpful on the recycling front is that the effort required to get the materials into the

correct recycle stream is minimized because of the uniquely and deliberately flimsy nature of the package structure. If consumers behave less than responsibly and fail to put these packaging components into the appropriate recycle streams, 75% of the materials involved are compostable under natural conditions. Translation: 75% of the materials will NOT wind up floating in the Pacific garbage patch.

When we challenged Saslekov on just how recyclable is the seven-layer coextrusion used for the inner pouch, he said this: "Maybe in the U.S. such a plastic would not be recycled, but in many countries around the world it would be." Even if he is wrong on that point, he emphasizes that today only about 20% of all reclyable containers are in fact recycled. So that makes the 3EPak bottle, which only contains 5 g of plastic, considerably less harmful to the environment than a typical 22.5-g PET bottle for a shelf-stable juice product. "If this package replaces only 2% of the plastic bottles sold globally today, plastic usage will be reduced by about 114,640,000 pounds per year," says Saslekov.

So where does 3Epak stand currently? "The most important goal is to find strategic partners," says Saslekov. "Considering that this format offers the best combination of cost, extended shelf life, recyclability, and biodegradability, we think such partners will step forward soon."

Coke To Test Paper Bottle

The Coca-Cola Company's first-ever paper bottle prototype is transitioning from the lab to the marketplace this summer through a limited online trial in Hungary.

By Pat Reynolds

run of 2,000 bottles of the plant-based beverage AdeZ will be offered in the pioneering package via e-grocery retailer Kifli.hu. The paper bottle project – which is being co-developed by Coca-Cola's R&D team in Brussels and Paboco, a Danish startup supported by ALPLA and BillerudKorsnäs in cooperation with Carlsberg, L'Oréal, and The Absolut Company – is moving into the consumer testing phase to measure the package's performance and shopper response to the format. Coca-Cola and Paboco initially unveiled the first-generation prototype, which is described as a paper shell with a recyclable plastic lining and cap, last fall.

The technology developed by Paboco is designed to create 100% recyclable bottles made of sustainably sourced wood with a bio-based material barrier capable of resisting liquids, CO2, and oxygen. Targeted products include beverages, beauty products, and other liquid goods. The ultimate goal is a bottle that can be recycled as paper.

Coke To Test Paper Bottle

The innovation supports The Coca-Cola Company's World Without Waste sustainable packaging goal to collect and recycle a bottle or can for every one it sells by 2030, while substantially reducing use of virgin packaging materials and using only 100% recyclable packaging materials. Achieving this vision requires investment in innovation and collaboration with partners to drive collection, recycling, and sustainable design.

Stijn Franssen, R&D Packaging Innovation Manager for Coca-Cola Europe, stresses that the breakthrough technology is still in development. Franssen's team has been conducting extensive lab testing to assess how the paper bottle performs, holds up, and protects its contents.

"This is new technology, and we are moving in uncharted territory," he explains. "We have to invent the technical solutions as we go along."

Coca-Cola will test this paper bottle in Hungary this summer.



Karin Ekroth, Senior Manager of Communications & Sustainability for The Absolut Company, shares how the world's sixth-largest international spirits brand with production of nearly 26 million gallons in fiscal year 2018/19—works toward a circular economy.

By Anne Marie Mohan

Packaging World:

Does The Absolut Company's sustainability goals mirror those of its parent company, Pernod Ricard, or have you tailored them specifically for the brands under Absolut?

Karin Ekroth:

As part of the Pernod Ricard Group, our sustainability and responsibility strategy is aligned with the 2030 roadmap, Good Times from a Good Place, which was launched in 2019. The essence of Good Times from a Good Place captures an idea that sits at the heart of our heritage as company—a simple commitment to do the right thing, whether it is for each other, our consumers, our business, our society, or the environment. This strategy covers four big ambitions: Nurturing Terroir, Valuing People, Circular Making, and

Responsible Hosting. While these strategic pillars are all relevant at different stages of our business, we are focusing on Circular Making, demonstrated by our ongoing commitment to a truly circular economy and ecosystem.

Regarding packaging, The Absolut Company's 2018/19 sustainability report includes goals such as increasing the use of recycled content in your packaging and using less cardboard. Do you have specific numbers attached to these goals?

Yes we have a variety of goals tailored to the brands within The Absolut Company. In April 2020, Malibu included 30% recycled PET plastic in our U.S. bottles, exceeding our goal and the commitment set by the Ellen MacArthur Foundation to achieve a target of 25% by 2025. We are excited and proud for this first step, but we won't stop there in our efforts to have a real impact. In the next one to five years, we will further increase the percentage of rPET use in plastic containers, as using rPET over virgin polymers drastically cuts carbon footprint.

Also, our goal for Absolut Vodka is to have an entirely circular process by 2040, and using recycled materials is part of that. The recycled content within our Absolut Vodka glass bottles is currently around 47%, and we plan to increase this 1% at a time to see how far we can get while maintaining the clarity of the glass.

We encourage using materials in a responsible way and encourage others within the sector to join us in this pledge. Not only does this mean rethinking and reducing the packaging we use, but also being conscious of the unintended consequences of any changes or actions we take as a business.

What are the challenges in using recycled content in a glass bottle? How have you overcome these challenges?

There are several challenges, one being the complexity. Impurities in recycled materials cause the glass to have a greenish tint, so we are working closely with our supplier, Ardagh, to increase our percentage while evaluating color and quality throughout the process.

Another challenge is sourcing the recycled materials. Not all glass is recycled, and not everything that is recycled can be used due to impurities or insufficient quality. Around 60% of all clear glass recycled in Sweden is reused in packaging, and the rest is for various building materials. We have a good system in Sweden, with 95% of glass being recycled by consumers. However for us to reach our goal of a circular process by 2040 and push the spirits industry further, we need consumers in other countries to start recycling their empty bottles more often.

According to Ekroth, the paper bottle initiative is a step-bystep journey to reduce and replace the need for polymers.



Can you provide an update on the project Absolut is involved with to create a paper bottle?

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We're hoping to create our preliminary batch of bottles, ready in September. So far, we have been working very closely with Paboco [a joint venture between paper packaging material developer BillerudKorsnäs and bottle manufacturer Alpla] and our community partners [Carlsberg, L'Oréal, and The Coca-Cola Company] to finalize our paper bottle prototype.

What is The Absolut Company's goal for the paper bottle?

The paper bottle initiative is a step-by-step journey to reduce and replace the need for polymers. In the long term, the paper bottle will become completely bio-based and biodegradable and, if successful, is something that we hope will spark a real movement for change—not just limited to the products within our own portfolio, but extending to all brands within the spirits industry.

P&G Debuts Paper Deodorant Tube

Procter & Gamble Beauty has announced that beginning this May at 500 Walmart stores in the U.S., both Old Spice and Secret brand deodorants will be introduced in all-paper, plastic-free, tube packaging.

By Pat Reynolds

rocter & Gamble Beauty has announced that beginning this May at 500 Walmart stores in the U.S., both Old Spice and Secret brand deodorants will be introduced in all-paper, plastic-free, tube packaging.

Precise details on the composition of the tube, how it's made, who fills it, how it's filled, and the identity of the supplier are considered proprietary. But Anitra Marsh, Associate Director of Global Sustainability and Brand Communications at P&G Beauty, does tell us this.

"This paper tube uses 90 percent recycled content and is certified by the FSC. The paperboard tube does not contain wax, plastics, BPA, or PFA. The paperboard has an interior coating that is made from an FDA-approved fluorochemical and corn-derived starch to make the paperboard grease-proof and water-proof. New paper fibers are added to the post-consumer recycled paperboard pulp to strengthen the base material."

P&G Debuts Paper Deodorant Tube

Unlike the traditional oval-shaped Old Spice container, the paper tubes are round. They're durable, feature a "push-up" design, withstand normal use, and have a suggested retail price of \$9.99, "in line with some of our other product offerings," says Marsh. P&G, which is completing the second phase of recyclability testing on the new package this fall, hopes to learn how consumers respond

to the design. If successful, P&G will expand the new package across more of its line-up.

The need for recyclable and reusable package solutions has accelerated dramatically in the past two years with reports of plastic waste accumulating in oceans and landfills. Countries that have historically taken plastic waste from the U.S. for recycling, such as China and the Philippines, have announced they will no longer accept plastic waste imported from abroad.

To combat this growing problem, both P&G and Walmart have publicly declared aggressive goals in sustainability. By 2030, P&G Beauty's brands have committed to using 100 percent recyclable or reusable packaging while reducing the use of virgin petroleum plastic by 50 percent. By 2025, Walmart says it will send zero waste to landfill for its operations in the U.S., U.K., Canada, and Japan.

According to Freddy Bharucha, Vice President

Beginning May 1 these paper tubes for deodorant from P&G will be available in 500 Walmart stores in the U.S.



P&G Debuts Paper Deodorant Tube

of Personal Care, P&G Beauty, "We co-designed this package with consumers who are interested in cutting back on plastic waste. The majority of Gen Z consumers have high expectations for environmentally friendly products."

"If we convert just 10 percent of our current deodorant packages to recycled paper or another recyclable material, it could eliminate up to 1.5 million pounds of plastic waste annually," notes Marsh. "This is just one example of how we are trying to make a difference and build a more sustainable future."

Speaking on behalf of Walmart, Jason Kloster, Senior Buying Manager, Body Care & Grooming, says this: "Walmart is steadfast in its commitment to transform retail in the interest of environmental sustainability. As the largest retailer in the world partnering with the largest deodorant and antiperspirant brands in the U.S., we know this new paperboard package has the potential to have significant positive impact and lay the groundwork for even broader impact."