

# PACKAGING WORLD NEWS ROUNDUP: SUSTAINABILITY

A comprehensive guide of sustainability  
best practices and case studies.



**PACKAGING  
WORLD**

# Coca-Cola Transitions Brands to 100% rPET, Unveils New 'Sip-Size' Bottle

**Among the innovations rolling out through July 2021 are new 100% rPET bottles, a new 13.2-oz bottle size, enhanced on-pack recycling messaging, and a new aluminum bottle for water.**

*By Anne Marie Mohan*

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**P**roducing more than a fifth of the world's PET bottle output of 500 billion bottles per year, The Coca-Cola Company has a significant stake in advancing the sustainability of single-serve plastic packaging. Not only are consumers looking to global Consumer Packaged Goods companies to make more eco-friendly packaging to reduce plastic pollution, but proposed legislation in a number of U.S. states will also likely demand such innovation in the near future.

In its ongoing efforts to tackle plastic waste, which the company says is "one of the globe's largest environmental concerns," Coca-Cola has announced it has begun transitioning a selection of plastic bottles across its U.S. beverage portfolio to 100% recycled PET, or rPET, excluding the cap and label. As part of

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this transition, the company will also be launching a new bottle size, switching from green to clear plastic for Sprite, and moving away from bioplastics for its Dasani brand.

Through the use of internal company tools and analysis, Coca-Cola says it has determined these innovations will reduce the use of new plastic by more than 20% compared to 2018—a 10,000-metric-ton reduction in greenhouse gas emissions annually, or the equivalent of taking 2,120 cars off the road for one year.

Brands making their debut in 100% rPET—beginning this month and rolling out through summer 2021—include all Coca-Cola Trademark varieties (Coke, Coke Zero Sugar, and Diet Coke), as well as Fanta, Sprite, Dasani, and smartwater. Of particular interest, the first 100% rPET bottle to be launched is a new, never-before-seen 13.2-oz “sip-size” bottle for the Coca-Cola Trademark brands, Sprite, and Fanta. Says Coca-Cola, the conveniently sized, sippable bottle was introduced to make sustainable innovations accessible to all.

Also included in the launch is a 20-oz 100% rPET bottle for Coca-Cola Trademark brands, Dasani water, and smartwater, as well as a 20-oz bottle for Dasani made from 30% rPET, and a new 18-oz aluminum bottle for smartwater.

The move to 100% rPET is a major step forward in Coca-Cola’s sustainable packaging strategy. However, given the U.S.’s woefully low PET recycling rate of 30% coupled with the increasing demand by CPGs for more and more of the material, the question becomes, how will Coke find the quantities of rPET needed?

Shares Alpa Sutaria, Vice President and General Manager, Sustainability; North America Operating Unit of The Coca-Cola Company, “We are

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working with several suppliers to source rPET for use in our packaging across the United States and are also continuing to invest in local recycling programs and infrastructure. In turn, this ensures that Americans can recycle our bottles and cans conveniently whether at home, at work, or in public spaces, which are—in turn—recycled and reprocessed to make rPET for use in our bottles and other products.”

In addition, in the largest on-pack messaging effort ever by the company, each 13.2-oz bottle features a prominent “Recycle Me Again” message on the label to encourage consumers to take action and recycle their bottles so they can be remade into new ones.

Another notable change to its packaging—the use of clear PET, rather than green—for its Sprite beverage in the 13.2-oz size was made, says Coca-Cola, to make it easier for bottles to be recycled and remade into new bottles. The company’s long-term goal is to transition all Sprite bottles to the new, clear packaging by 2022.

Sutaria acknowledges that one hurdle to introducing 100% rPET in the past has been the haziness resulting from recycled materials. “There is a slight tint to 13.2-ounce

Placeholder

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100% recycled plastic, which has to do with the fact that these bottles are made from recycled plastics, and it is challenging to make the plastic perfectly clear,” she says . “Clear or blue-tinted bottles are necessary to make new bottles for made from recycled PET, so for this reason, we are also introducing a new 13.2-ounce bottle made from 100% recycled material in a new, clear package in the Northeast, Florida, and California this month.”

Also of note, Coca-Cola is moving away from the bioplastics-based PlantBottle, in use since 2009 for its Dasani brand, opting instead for a new 20-oz 100% rPET bottle. Explains Sutaria, “New 20-ounce bottles made from 100% recycled plastic will start rolling out in March 2021, building on Dasani’s growing portfolio of more sustainable packaging. The evolution from PlantBottle to HybridBottle [announced in 2019 and made from 21% PlantBottle material, 30% rPET, and 49% virgin PET] to 100% rPET reflects Dasani’s ongoing commitment to finding more sustainable solutions that meet consumer demand.

“We have pivoted our plans in 2021 to focus on 100% rPET for sparkling and water brands in response to consumer testing, which showed a clear preference for 100% recycled content packaging over other choices, including renewable material.”

Following is the timeline for the rollout of the new packaging:

- The new 13.2-oz sip-sized bottle is being introduced this month at convenience retail locations in the Northeast, Florida, and California, for Coke, Coke Zero Sugar, Diet Coke, Fanta, and Sprite, with an SRP of \$1.59.

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- Also debuting this month is a 20-oz bottle made from 100% rPET, available in California, New York, and Texas.
- A new 18-oz resealable, reusable 18-oz aluminum bottle for smartwater is launching this month as well, in California and Florida.
- In March 2021, Coca-Cola will launch the 20-oz, 100% rPET bottle for Dasani in New York, California, and Texas.
- The 20-oz Dasani bottle made from 30% rPET will be available across the country in April 2021.
- In July 2021, smartwater will be introduced in a 20-oz, 100% rPET bottle in New York and California.





# How Hasbro is Phasing Out Plastic Packaging

**The global toy company plans to eliminate all plastic packaging for new products by the end of 2022 and is introducing two new products that will “bring sustainability to family game night.”**

*By Kim Overstreet*

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“We’re trying to sell toys, but we’re also trying to genuinely make the world a better place and hopefully preserve some of the resources that this world has left to offer our kids,” said Hasbro’s Ben Kuchler, Director of Product and Package Sustainability. Kuchler and Jacquie Patterson, Senior Manager of Package Engineering on the Sustainability Team, presented at Sustainability in Packaging US this week, and talked about the company’s broad sustainability actions over the past decade, as well as their path for the future.

Hasbro, creator of iconic toys and games such as Nerf, My Little Pony, Transformers, Play-Doh, Monopoly, Baby Alive, and Power Rangers, has also partnered with brands such as Disney, Marvel, and Star Wars. Kuchler said that in 2018, Hasbro became the first toy company to offer a recycling program for US customers. And through a partnership with TerraCycle, Hasbro recycles the “retired” toys back into things like playground equipment, park benches, and

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flowerpots. The program was expanded to France, Germany, Brazil, and Canada in 2019, the UK in 2020, and “a bunch of other countries are being planned for the years ahead,” said Kuchler.

According to Patterson, Hasbro started their sustainability journey over a decade ago by eliminating tissue paper in shipping cartons, and the polybags used to contain instruction sheets. In 2010, the wire ties that hold toys in place in the packaging were substituted with paper ties. In 2013, PVC in the packaging was replaced with PET, which by 2016 included 40% recycled content. In 2018 Hasbro began switching to bioPET. Said Patterson, “Our journey was working toward making continual improvements to our materials and improving our plastic materials.”

The company has also long been working to reduce packaging material and waste in e-commerce packaging and designing packaging specifically for the e-commerce channel. In 2017 Hasbro launched recycle labeling on packaging to help inform North American consumers on how to recycle the product packaging.

Said Kuchler, “Toys have been packaged in PET blisters, or PVC blisters for 50 years now. And so, we created a new filter for ourselves and said, wherever we don’t physically require plastic in our packaging to deliver it safely to the consumer, whatever that

**The first fully sustainable board game. Hasbro**





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product experience might be, we're trying to eliminate it and phase it out." To that end, the company is focusing on eliminating poly bags, elastic bands, elastic fasteners, shrink wrap, PET window sheets or blisters. (This initiative is focused on primary packaging, but there are some secondary/tertiary packaging elements that are being focused on as well.)

And Kuchler said Hasbro hopes to provide "a sense of leadership within the packaging industry, or at least within the toy packaging industry, to encourage our partners and our competitors to look and see if they can do better as well."

### CASE STUDIES

**NERF Ultra Dorado:** This item had a new dart that the company wanted to showcase. The original packaging displayed the new dart in a blister in the top right corner. But going forward, said Patterson, "what the team is doing is providing a graphic rendering of what that dart looks like enlarged a little bit, to be able to really showcase that...rather than physically showing the product." The remaining darts which would normally be packaged in a poly bag are now wrapped in tissue paper and located inside the closed portion of the box to eliminate the poly bag.

**NERF Alpha Strike:** With this product Patterson said they were wanting to eliminate the plastic fasteners. The NERF gun is put in a sleeve package that eliminates the need for any fasteners at all, by 'trapping' the blaster in certain locations to be able to hold it into the packing.

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My Little Pony: This packaging, said Patterson, tends to be big blister cards with an outer blister and a support blister behind.

Hasbro chose to use photography to highlight the contents, as well as use some paperboard straps to graphically show some accessory pieces while also holding the product in place.

Baby Alive: This line has a lot of large baby dolls that come with a variety of accessories. Instead of support blisters, the middle of the package contains a new plastic-free foil package, with strategic dye cuts to be able to showcase some accessories inside. Paper ties also showcase some of the pieces. Patterson

said the added challenge for Baby Alive and some other brands in Hasbro is that some regions around the world require packages for products like this to be more enclosed for their open-air markets, as well as needing to deliver an enclosed package for e-commerce because of the item being at a lower age grade. (For Amazon products that are age graded at three and under, the package must be enclosed.) Hasbro created an enclosed version that solves for both of regional and



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e-commerce issues by using the same open package, but with a sleeve over it that at retail the consumer can lift and still see what the product is, but the sleeve portrays an image of the product, enabling the consumer to see what is inside.

Added Kuchler, “Both through consumer testing and then also a lot of other evaluation, we’ve definitely realized the value of using photography and/or the ability to use photo realistic imagery to convey play pattern.”

Mr. Potato Head: This product, which has come in a package with both outer and inner support blisters, is launching later this year in an enclosed box package.

### NEW PRODUCTS

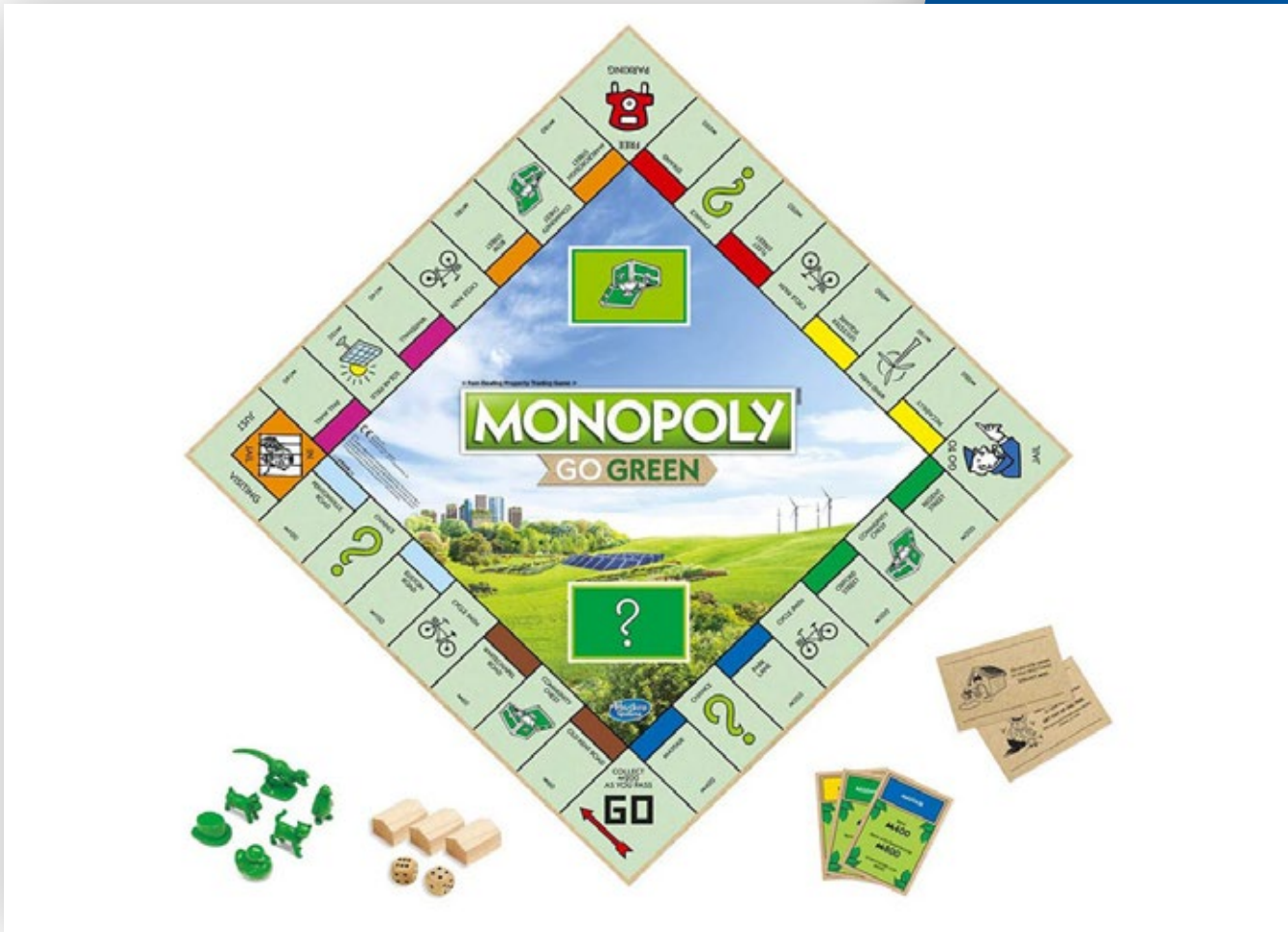
Hasbro is quietly launching two new fully sustainable product offerings in plastic-free packages. The first is a Mr. Potato Head made with plant-based plastic instead of plastic from fossil fuels. Said Kuchler, “Mr. Potato Head Goes Green is the same five-inch toy that everybody knows and loves. But this farmer is made with plant-based plastic derived from sugar cane, which is a renewable raw material.” The packaging is plastic free and also uses FSC-certified paper and supports responsible forestry.

Monopoly Go Green launched at Walmart in December 2020 and is the first fully sustainable board game. The package, game board, game guide, money cards, and all paper content is made from 100% recycled paper. The greenhouses and the dice are made of FSC-certified wood from well-

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managed forests, and the tokens - which are normally in die-cast zinc material - are made with plant-based plastic derived from sugar cane. And finally, the gameplay is designed to educate players to be eco-conscious by rewarding them and encouraging them to 'green up or clean up' their properties.

Said Kuchler, "The learnings from this exercise are paving the way, not only for Monopoly, but really the way that we package all of our games in the future. This is a huge milestone for us and it's honestly just a tiny baby step in the beginning of our product sustainability journey."



# Burger King and Tim Hortons to Pilot Reusable Packaging

**Matthew Banton, Head of Innovation and Sustainability, Burger King Global, shares how Burger King and Tim Hortons will be piloting of reusable packaging under the Loop circular packaging platform.**

*By Anne Marie Mohan*

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**Q**uick-service restaurants Burger King and Tim Hortons, both part of Restaurant Brands International (RBI), will soon be piloting a program in partnership with TerraCycle's Loop circular packaging platform that will allow guests to specify reusable containers and cups when they order select food and beverage products. The closed-loop system will require guests to pay a deposit that will be refunded upon return of the packaging, which will then be cleaned by Loop for reuse, again and again.

The initiative falls under RBI's sustainability platform, Restaurant Brands for Good. "As part of our Restaurant Brands for Good plan, we're investing in the development of sustainable packaging solutions that will help push the foodservice industry forward in reducing packaging waste," says Matthew Banton, Head of Innovation and Sustainability, Burger King Global. "The Loop system gives us the confidence in a reusable solution that meets our high



safety standards, while also offering convenience for our guests on the go.”

Guests, Banton emphasizes, are at the center of all the decisions RBI makes. Therefore, when the company saw its guests expressing greater and greater interest in minimizing their impact on the planet, it pursued the idea of reusable packaging as one strategy.

“Understanding that reusable packaging is not something that’s typical within the QSR space, we wanted to make sure we found the right partners that could help us explore the topic and also present it in a way that could be executable,” Banton says. “So, we connected with the team at Loop, and we found we had mutual interests, starting essentially with minimizing our impact on the planet. Once we agreed on those principles, it was clear the partnership made sense on both sides.”

The pilot will launch in 2021 in select Burger King restaurants in New York City, Portland, and Tokyo, and in select Tim Hortons locations in Toronto. These pilot cities were chosen for two reasons, shares Banton: “One, we have amazing franchises in those locations—we have good operators and good footprints for our businesses there. On top of that, those are also markets that leverage the networks where Loop is already established, which will help maximize our ability to get into these pilots as quickly as possible.”

Prototypes of the reusable packaging, which include a container for sandwiches and a beverage cup for soft drinks and coffee, were developed by RBI’s in-house design team along with one of its agency partners. Banton says the prototype is just an initial starting point; he foresees many tweaks in

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the coming months before the designs and materials are finalized. Considerations include what functional features will be needed, such as opening and closing and the height and width of the packaging, and how these will fit into the QSRs' supply chain systems, how the packages can be adopted around the world, and how they can be made scalable. RBI is also targeting a minimum of 100 uses for the packaging. "Then, ultimately, it will depend on how guests adopt the program once we do the pilot," Banton adds.

The container deposit cost is also still being determined. RBI is working with Loop to identify the proper threshold to ensure the deposit is low enough that guests will adopt the program, but high enough that they will be encouraged to return the packaging. "There's still a lot of work to do to finalize that piece," says Banton. "I think it also goes hand in hand with the final creation of the reusable asset, because those things are intrinsically tied. So, I think they'll come together at relatively the same time."

As for the return and deposit collection system, RBI currently envisions a system whereby when the consumer is ready to return the reusable packaging, they will scan



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the cup or container through the use of the Loop app, at which time their deposit will be returned, and they will place the package into a designated Loop receptacle or collection bin.

The packaging will then be professionally cleaned and sanitized by Loop. Says Burger King, “Our partnership with Loop aligns with Burger King restaurants’ rigorous safety procedures around cleanliness and hygiene, all of which have become even more pressing during the current pandemic. Loop’s cleaning systems have been created to sanitize food containers and cups, meaning each will be hygienically cleaned and safe before each use.”

While Banton says no one knows the future when it comes to sustainability and some of the new green packaging initiatives, RBI is testing things now to make sure its business is future-proofed. “So, will reusables be part of the future? I’m not sure. But if they are, we’ll be ready.”

# Nestlé Achieves ‘Paperization’ of Confectionery Packaging

**Transitioning from plastic to paper for 419 SKUs of its Smarties brand chocolate candies requires extensive R&D in new materials, new package designs, equipment compatibility, and recycling potential for Nestlé.**

*By Anne Marie Mohan*

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**T**wo years in the making—from concept to launch— Nestlé’s introduction in June 2020 of its Smarties chocolate candies in fully recyclable paper packaging represents a world first for a global confectionery brand, the Swiss-based company claims. The project, which saw packaging for 419 SKUs of the popular sugar-coated chocolate candy moved from plastic to paper, involved greater complexity than even Nestlé anticipated when it first embarked on the journey.

Challenges included developing a paper substrate that could provide the same functionality as plastic, while still being 100% recyclable and able to run at high speeds on the company’s existing packaging equipment. Nestlé also had to reimagine many of its iconic packaging designs—which could not be reproduced with paper—with new structures capable of conveying the same joy and fun for which the brand is known.

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The project used as its starting point the work done on a fully recyclable paper wrapper developed at Nestlé’s R&D Centre for Confectionery in York, U.K., in collaboration with the Institute of Packaging Sciences in Lausanne, Switzerland, for Nestlé’s new YES! fruit and nut bar. The YES! bar packaging was the first such structure to be able to run at 300 packs/min on a cold-seal flow-wrap machine.

To adapt the paper packaging material for Smarties, Nestlé called upon 50 R&D staff, along with the company’s global R&D network of 180 packaging experts worldwide.

The first Smarties pack to be launched in the new paper packaging was for its popular sharing block, an 18-square chocolate bar filled with mini Smarties. According to Nestlé, 3.5 million Smarties blocks are sold each year. Given the scope of the plastic-to-paper project, the company shares that in total, the conversion of all SKUs to paper will eliminate more than 400 metric tons of plastic packaging, including more than 38 million plastic lids and plastic stickers, worldwide, based on 2019 annual volumes.

### **Conversion supports Nestlé’s global sustainability commitments**

In 2018, Nestlé announced its commitment to make 100% of its packaging recyclable or reusable by 2025 in line with the Ellen MacArthur Foundation’s New Plastics Economy (NPEC), a global initiative that seeks to address plastic waste and pollution at its source. As Rob Cameron, Global Head of Public



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Affairs for Nestlé SA, explains, currently 87% of the company’s packaging is already recyclable or reusable.

In 2020, Nestlé announced another goal—to reduce its use of virgin plastic by one-third by 2025. “That sounds relatively straightforward,” says Cameron, “but there is a huge challenge for us in this, which is the availability of food-grade recycled plastic that we can use as feedstock for our packaging.”

To close the 13% gap in making all its packaging recyclable and reusable and to reduce its use of virgin plastics, Nestlé has identified five action areas:

To ensure its packaging is 100% recyclable or reusable by 2025 and to reduce its use of virgin plastics by one-third by that same year, Nestlé identified five action areas.

According to Alexander von Maillot, SVP Global Head Confectionery & Ice Cream Strategic Business Unit, Nestlé SA, it was this 2018 global announcement that inspired the confectionery group to pursue new packaging for Smarties in order to advance the company’s sustainability goals.

“We were sitting together and thinking, how can we step up with



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confectionery, and what can we do to set a good example?” he recalls. “And soon we started to talk about Smarties, as it is a brand so much linked to children, and therefore it was a perfect fit to take care of the future of our next generation.

“We decided, why not make Smarties the first plastic-free confectionery brand. It felt very compelling and logical. But it was easier said than done, especially when we began to look at the details. We then understood that we had a massive challenge ahead of us. We are producing roughly 280 million packs per year. And at that time, 250 million of them were using plastic. Thus, we had to change 90% of our portfolio. Ninety percent meant we had to transition 419 SKUs, some 400 different formats, shapes, and different types of packaging, to paper.”

Adds Bruce Funnell, Packaging Lead from Nestlé’s Product Technology Center in York, “When we actually looked into the data, we found that plastic was used everywhere, albeit in a small ways sometimes, such as a sticker or an Easter egg fitment, the pouches, the bags, the windows in cartons—each one had to be tackled in a way to ensure that each of the problems could be solved.”

### Paper provides best circularity

The main goal for the Smarties packaging, in fact for any packaging, says Funnell, is to contain, protect, and preserve the product—a job that plastic had performed exceptionally well for years. “We deliver Smarties in a way that the consumer can dispense and enjoy the product safely. Safety is our ultimate priority,” he says. “And when you look at plastics, they have been the ultimate choice for many years because they have great attributes. They’re strong,

lightweight, and affordable. They do a tremendous job of protecting the food with a minimum amount of resources. And that’s why it’s used so widely.”

The problem with plastic, however, is that many times it’s not recycled, or even worse, it becomes litter. “We believe that by moving to paper, Smarties can really help to make a difference and play a key role in Nestlé’s journey going forward,” Funnell adds.

Paper was not the only substrate considered as a replacement for plastic, however. As Funnell explains, when making a packaging change, Nestlé considers all types of materials and end-of-life scenarios to make sure the package it designs provides the best value and supports the circular economy. One alternative was a compostable material.

“On the face of it, compostable materials sound ideal because they break down naturally into the environment,” Funnell says. “But the challenge with compostable materials is twofold. First, for home composting, when we really look at the number of people who home compost, it’s very small. So the chance of the packaging actually getting composted is small. And then if we talk about industrial composting, the challenge there is that there are very few industrial composting facilities, and the risk is, if it goes into a conventional recycling system, it can actually pollute the recycling stream. So we have to be very careful how and where we use compostable materials.

“Our vision is that all of our packaging is recyclable or reusable by 2025. So paper, already having a very well established recycling stream, really answered that question and so provided a great vehicle for a circular

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design of a new package.”

Part of Nestlé’s goal is to change consumer behavior around the use of packaging. On-pack messaging for Smarties encourages recycling of the packaging after use. The goal was also to design a package that would provide a clear benefit to consumers. Says von Maillot, “People know this material [paper], and so it gives us a very easy and simple story, because Nestlé’s commitment is also about helping to educate consumers on new behavior.”

As desirable as paper is from a recycling standpoint, however, it does lack much of the functionality of plastic, acknowledges Funnell. It’s not as strong as plastic, it tears easily, it’s stiffer, and it lacks the oxygen and moisture barriers provided by plastic. It’s also a very open and porous structure, which poses a problem for printing graphics onto the packaging.

Typically, Funnell explains, plastic packaging for a confectionery product such as Smarties comprises multiple layers, including an inner layer, a barrier layer (typically aluminum), a print layer, and a final surface layer for protection, between



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each of which is an adhesive layer. To move Smarties from this multilayer structure to a paper material required developing a cellulose structure and a proprietary, water-based coating that together could provide the needed functionality and recyclability.

“By doing that, we created a material that can be easily separated and recycled, so we can recover the fiber, and we can reuse it,” explains Funnell. “And we can also recover the waste elements, which we can use either for further recycling, or we can use it for incineration for energy. So we can recover the vast majority of the material.”

The final, proprietary paper structure was developed by the York R&D center in conjunction with Nestlé’s packaging engineers and scientists, its factories, its suppliers, and recyclers “to ensure not only that it could be used, but also that it could be recycled at end of life,” Funnell shares.

### Nestlé ensures sustainable sourcing of fiber

When designing new, more sustainable packaging, Funnell says Nestlé considers a package’s full supply chain, from raw materials through to end of life, to ensure the new material doesn’t solve one problem while creating another. “To do that, we use a lifecycle-based assessment tool that allows us to design our thinking around different packaging solutions to make sure we don’t create a problem in another area,” he says. “And then we consider all the environmental impacts.”

For its fiber-based packaging, Nestlé works directly with its suppliers to ensure that all paper, pulp, and board comes from sustainable sources. Packaging for



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the new Smarties packs uses fiber from proprietary suppliers that is 100% traceable back to country of harvest. In addition, a minimum of 90% of the fiber volume is responsibly sourced within Nestlé’s definition, which reinforces the company’s specific commitments on deforestation and forest stewardship, rural development, and water stewardship. Nestlé uses certifications such as Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC) to demonstrate compliance.

Funnell notes that paper has the added advantage of being available at the scale needed for a company such as Nestlé. “The trees we need for tomorrow are planted today, and the trees we need for today were planted yesterday, so there is enough paper for us to make the change sustainably,” says Funnell. “And the fact that we recycle the material over and over again several times means that we keep the material in the loop. Whereas, if you consider plastic that is not recycled, probably the best case is that it will be incinerated for energy recovery and the worst is that it will be littered.”

### **New packs designed to delight customers**

Switching to more sustainable packaging often comes with tradeoffs. For Smarties, it was the shedding of some of its iconic packaging structures in favor of new ones that could more easily be produced with paper. “As a brand guardian, it’s really hard because we had to give up on core brand assets, something you never want to do when you really nurture and build a brand,” says von Maillot.

One example is the Smarties Giant Tube, a paperboard tube holding 4.59-oz of the chocolate candy, with a plastic lid that could be removed with the flick of the thumb. The iconic tube was used for everything from a teaching tool to demonstrate a cylinder shape to students, to a range of games invented by children. von Maillot himself remembers using the empty tube as a telescope when he was young.

“But we understood that we had to step it up,” he says. “If we wanted to move out of plastic, there was only one way—we had to change the shape.” The new package is a clever refresh, converting the cylindrical tube to a hexagonal shape. Designers were also able to retain the iconic opening mechanism, but with paper instead.

The redesign of three iconic Smarties packages was necessary in order to convert from paper to plastic. Another redesign involved the packaging for multipacks of smaller Smarties tubes, which were formerly held in plastic pouches. Now, multipacks are made from a number of paperboard tubes connected by a perforated paper label, whereby individual tubes can be torn



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off the main package. “It’s a really innovative connecting system, which is memorable and fun,” say von Maillot.

For tiny boxes of mini Smarties—handed out at birthday parties, for example—Nestlé replaced the plastic pouch holding the tiny paperboard packs with one made of paper. “Not only does it look great, but it feels great, and I think it even sounds great,” says von Maillot. “It’s paper, yet it protects the product inside just the same way as plastic did before.”

Another part of the redesign process was to tell consumers about the change on the packaging. Smarties has always been committed to helping parents inspire and educate children. According to von Maillot, many children have learned the names of colors and counting with the brightly colored treats and have learned things such as how to draw through on-pack activities.

“We know that to meet our 2025 commitment, we have to help educate and encourage the right behaviors,” he adds. “And the communication on our packs is all about encouraging that behavior in an engaging manner, reminding parents and children that Smarties is working hard to do the right things.” On-pack messaging includes the copy, “Let’s be recycling heroes! Enjoy and recycle in the paper bin!” and “Paper from responsible sources.” The packaging also advises that the product uses only natural colors as well as sustainable cocoa.

### Equipment investments required

As noted earlier, another fundamental challenge was engineering the material to run on Nestlé’s equipment. Just as plastic has been optimized for packaging,

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so too has the packaging equipment been optimized to run plastic. “So to enable paper to fulfill its role, we really needed to bring some clever innovation to make that work, to run effectively and efficiency on our automatic lines,” says Funnell.

Nestlé’s largest Smarties production plant is in Hamburg, Germany, where 20,000 tons of Smarties are produced each year. That translates to more than 20 billion pieces of Smarties going out from Hamburg to more than 50 countries, mainly in Europe, as well as South America and Asia.

To accommodate the new paper packaging, Nestlé invested \$10 million Swiss Francs (approximately US\$10.8 million), much of which was used to install a new line for the hexagonal Smarties Giant Tube. According to Arturo Galván, Factory Manager of the Hamburg Chocolate Plant, some of the investment was also used to modify existing equipment for the paper bags, such as the vertical form/fill/seal machines used for the bags of mini Smarties. “Although we just changed the plastic material to paper, we had



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to guarantee that the parameters, including the temperature for sealing, matched perfectly, because if we take a very high temperature, we can burn the paper. And if the temperature is too low, we cannot guarantee that we’re sealing the pouch properly.”

### The beginning of the ‘paperization journey’

Since the introduction in mid-2020 of the Smarties Sharing Block in paper packaging, initially in U.K.’s Asda supermarkets, Nestlé has been rolling out various formats in the new paper packaging globally. Before the paper packaging project, 10% of Smarties products were in paper packaging; today, the entire brand portfolio of 490 SKUs is packed in 100% recyclable paper.

Among some of the other redesigned Smarties formats are a sharable, reclosable stand-up paper pouch; a paper carton for the travel retail-exclusive Smarties Music Maker product, formerly in a plastic tube; and the display trays used to hold Christmas and Easter hollow figures, which are now paper.

Among the new formats are a hexagonal paper tube for the Smarties Giant Tube, a multipack consisting of paper tubes held together with a label, a paper bag for small cartons of mini Smarties, and a stand-up pouch. In April, a press release from Amcor announced that Smarties had released paper packaging for its Chocolate Block and Bar product range in Australia that was developed with the packaging provider.

According to von Maillot, Nestle is at the beginning of its “paperization

## Nestlé Achieves ‘Paperization’ of Confectionery Packaging

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journey.” After tackling the YES! snack bars and Smarties portfolio, Nestlé also introduced a new 100% recyclable paper pouch for its Nesquik All Natural cocoa powder in Europe. Currently, the company is looking at its ice cream packaging as the next target.

“It’s really a journey—it is step by step,” von Maillot says. “We need to look at what brands make sense. Can we protect the product enough by packaging it in paper? And then we will test and learn and roll out more products and brands with time.”

PACK EXPO Las Vegas and Healthcare Packaging EXPO (Sept. 27-29, Las Vegas Convention Center) will reunite the packaging and processing community, offering new products, technologies, and solutions, while implementing up-to-date protocols for a safe and successful in-person event. Attendee registration opens in May.



# Exclusive Interview: Palmolive Ultra Moves to 100% rPET Bottle

**Speaking with Packaging World in advance of the launch, Greg Corra, Global Packaging Innovations & Sustainability, Colgate-Palmolive, discusses the development of the new 100% recycled-content, recyclable bottle.**

*By Anne Marie Mohan*

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**O**n March 18, Colgate-Palmolive will be announcing the relaunch of its iconic dish liquid brand, Palmolive Ultra, with new, 100% biodegradable cleaning ingredients coupled with a bottle made from 100% recycled-content PET. Palmolive Ultra is the most widely distributed and purchased line within the portfolio, and Colgate-Palmolive estimates the move to 100% rPET will help divert 5,200 metric tons of plastic out of landfills in the U.S. and Canada. This also makes Palmolive the biggest dish soap brand in North America to shift to 100% post-consumer recycled material, based on 2020 sales data.

Palmolive is responsibly made at a Colgate-Palmolive facility in Cambridge, Ohio, that has achieved TRUE Zero Waste certification from Green Business Certification Inc.™ (GBCI®).<sup>3</sup> The new PCR Palmolive Ultra bottles feature

## Exclusive Interview: Palmolive Ultra Moves to 100% rPET Bottle

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labels that highlight the brand's use of recycled plastic, 100% ingredient transparency, and a How2Recycle® logo, which clearly communicates recycling instructions so shoppers can properly recycle the bottles at home and help stimulate the circular economy.

According to the company, the new line will be available this month at retailers nationwide in a 20-oz size for an SRP of \$2.49.

In advance of the announcement, Greg Corra, Global Packaging Innovations & Sustainability, Colgate-Palmolive, spoke with Packaging World about how the relaunch came about and how it fits into the company's broader sustainability goals.

### **Packaging World:**

**Why did you select Palmolive Ultra for this change and why this category overall?**

**Greg Corra:**

We have a broader strategy of increasing the use of recycled content across our portfolio, and we decided to lead on this in the U.S. with Palmolive Ultra, a.) because of the scale that brand has and it's part of a broader initiative to really lean in on sustainability with Palmolive Ultra, including the product as well, and b.) due to the heritage and position of the brand. These were all considerations.

**What was the existing bottle made from? Did it include recycled materials?**

The bottle was clear PET with a clear polypropylene cap. So prior to the change, we were between a 25% and 35% rPET, depending on the SKU and depending on availability. And now we're moving to 100% rPET across the range.

**With Palmolive Ultra, you've joined a new, more environmentally friendly formula with the new packaging. Did the formula come first or the packaging?**

They actually came together, and it was part of the relaunch discussions on really to lean in. We knew that it couldn't just be the packaging or just be the formula. So it was a joint decision. And that's been a trend more and more, at least within Colgate, to tie product and technology in the pack into a singular story and a singular body of work.

**Could you talk a little bit more about how this fits in with Colgate-Palmolive's larger sustainability goals?**

Absolutely. So our broader sustainability strategy includes as one of the 11 core actions eliminating plastic waste. And that's all, obviously, plastics, and packaging is a significant part of that. And then within that strategy, circularity is at the core. And what I mean by circularity is moving from a linear kind of make-use-dispose approach to a more circular approach that includes recyclability, reuse, and compostability. So, as we look to apply that broader corporate strategy on this relaunch, moving to 100% rPET was a critical part of that, because the bottle design in and of itself is very recyclable.

So PET is one of the most active recycling streams. We're using clear bottles, no colorant. We're using BOPP [biaxially oriented polypropylene] labels with washable adhesives to improve the stream, but that's feeding into it. So we wanted to pull from the circular economy as well. So by using 100% rPET, that's in an aim to kickstart and forward that on both ends.

And this also feeds in to a goal we recently announced to reduce the amount of virgin plastic we use as a company by a third on absolute terms. So that's a pretty ambitious target, and using an increased amount of post-consumer

recycled content is a core pillar of that.

**In looking at many CPG's sustainability strategies, there is a big push toward using less virgin material and more recycled content, but there is definitely a consumer backlash against single-use plastic packaging. Did you look at alternatives to plastic? And if so, why did you decide to stay with plastic?**

That is a great question. And yes, we have a very wide range of materials that we look at for our broader portfolio and each relaunch. On this specific one, on Palmolive Ultra, why we landed at rPET was a combination of the overall environmental footprint, usability and performance of the package, circularity, and scalability. So this is one of the larger brands we have, and we're looking to do something that was authentically sustainable, authentically circular, and can be done at scale and with the performance that consumers expect.

**How do you convey that message to consumers, that yes, it's plastic, but this is the best and most sustainable option for this product, and we're doing everything we can to use recycled materials and to ensure it has every opportunity to be recycled?**

That is a tough question, because as

On March 18, Colgate-Palmolive will be announcing the relaunch of its iconic dish liquid brand, Palmolive Ultra, with new, 100% biodegradable cleaning ingredients coupled with a bottle made from 100% recycled-content PET.



you may know, when you're communicating to consumers and the average person, you need to meet them where they are and use language that they understand. And oftentimes, like scientific analysis of life cycles and things like that are kind of murky and not clear. So here, where we're trying to land it, is that the story of everything in this bottle is made from plastic that is already in the world. Right? And so it's about this, it's a PCR story. So it's not trying to have the conversation of plastic versus non-plastic, or this versus that. It's just stating that we're using a material that is already out there and is circular. So that's primarily how we're trying to convey this and land that within a broader story about the formula and package together.

**What technical challenges did you face in moving to 100% recycled content? And how did you address those?**

In this category, as a company we're very vertically integrated. So we injection mold our own preforms. We blow our own bottles. We label our own bottles, all in house. So we take in resin and we output a finished product. So the technical hurdles were not something we could outsource to a packaging supplier. We needed to solve them ourselves. So finding the right material specification from both a processability standpoint and a purity standpoint was critical because we did not want to change the iconic Palmolive Ultra bottle shape. It's something that's been around for a while. People recognize it. So the challenge was how do we get a 100% rPET on the same mold with the same geometry? So that was through finding the right specification of the material and the right supply, and setting the right intrinsic viscosity

so that it would run on the equipment. So, that was number one. And then number two was validating that entire process from preform injection to bottle blowing to the full efficiencies of production.

**Okay. Did you have to do a lot of tweaking to equipment to make this happen?**

So from a settings perspective, yes. We did not need to change the asset base, but for sure, packaging plus manufacturing were in it together to ensure that this new material ran on our equipment. So it was more about settings, and less about new machinery.

Colgate-Palmolive has made sustainable packaging a key priority. From recyclable toothpaste tubes to aluminum bottles for mouthwash, they're locked in on eliminating plastic waste and delighting consumers.

**One of the issues with using 100% rPET in packaging has been the cloudy appearance of the material. How did you address this?**

So we know that the color and the clarity is different on recycled material versus virgin. And we made sure we looked at it holistically. So we're looking at the bottles filled, with the labels on it, and with the specifications we set for performance, the level of clarity there was quite good. Also, we found that there is growing familiarity with recycled PET, and I would say a higher fluency in what that looks like. So what maybe 10 years ago would be viewed as maybe an imperfection or a flaw, it is now more readily seen as, that's what recycled resin looks like, like a slight blueish cast. But I've personally been very impressed with how clear rPET has gotten.

**Is that due to the elimination of a lot of the contaminants during the recycling process?**

Yes, absolutely. And we've designed our bottles to do that as well. So less



contamination, less yield loss. So we're moving to all clear PET bottles. We're using labels with washable adhesives to improve the stream as we feed into it. And then also, so that it's better for when we pull [recycled material] out of it.

**You're not the only company that has committed to use more recycled content in your packaging, especially PET. Do you have concerns about how you're going to be able to source enough recycled content for your packaging?**

So for this relaunch, we've done quite a bit of work to ensure that we've got the necessary material to get to 100% ongoing. More broadly speaking, as an industry, you are absolutely right that there's less material out there than the public commitments to use that material. So we have to approach this from both ends. It's beyond a linear supply-demand on a material perspective. We've got to have a part to play as a company that manufactures packaging to make sure that what we make goes in and aides a clean stream of material, and then also that we make efforts to improve it as well. So it's coming from both ends. So for our use on Palmolive Ultra, we are making sure the material is there, but as a broader statement, yes, there is much work to be done to increase recycling rates, to improve the yield of the recycling process,



and improve the purity and availability of recycled resins.

**Is Colgate-Palmolive involved in any of the industry associations or groups that are working toward increasing recycling rates through different initiatives?**

Absolutely. So we're a member of the U.S. Plastics Pact, we're highly engaged with the Association of Plastics Recyclers, as well as a signatory to the Ellen MacArthur Global Commitment, which has aims of improving recyclability and recycling rates. The U.S. Plastic Pact, which includes us, retailers, other companies, and NGOs has an aim to improve recycling rates beyond 50% in the U.S. We are also engaged with other organizations such as The Recycling Partnership and so forth.

**In terms of the Palmolive Ultra bottle, what scope are we talking about? How much virgin plastic will be reduced through this initiative?**

So the virgin plastic reduction, we're putting at 5,200 metric tonnes per year.

**And are you going to be expanding this initiative to other Palmolive dish liquid brands?**

We're broadly, as a corporation, at a minimum committed to use at least 25% recycled content across all of our portfolio. So there will be additional brands and packages that see increased PCR use. The specific timing and brands of what hits when, there's more to come on that. But for sure there will be more coming, and especially beyond the 25% PCR, the absolute reduction in virgin plastic across our portfolio, I would expect increases in reuse, refill design, and more PCR in many places.

# Expressed Juice's Landfill-Biodegradable Bottles Withstand HPP Pressure

**Florida-based premium juice distributor finds the perfect mix of technology and shelf appeal with its biodegradable bottles.**

*By Joe Derr*

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**W**hen Paul van Hamond arrived in the U.S. in 2012, he didn't expect he would end up staying nine years. A native of Queensland, Australia, van Hamond was taking what he thought would be a six-month sabbatical from running the five restaurants he owned in Australia to pursue another business venture.

"That venture didn't get legs," says van Hamond, also a chef who trained in Monaco and London. "But when life gives you lemons, you make lemon juice, and that's literally what I did."

The Drinks Company, the premium juice distributor he founded by squeezing those lemons, has grown to be a dominant player in South Florida, he says. "Today, we distribute about 22 brands throughout South Florida and the Caribbean, focused mainly on our main sector in hospitality

and cruise lines.”

The rise of The Drinks Company reads like a case study in being in the right place at the right time: Not only did Drinks start in Miami—one the world’s juice capitals—just as the fresh juice market had started to boom, but according to van Hamond it also was an early adopter of high pressure processing (HPP) to deliver juice, working with some of the technology’s Miami-based pioneers.

### **‘Better beverage company’**

The Drinks Company was founded in 2014 by van Hamond and his business partner, Wilfredo Pinillos, who also brought a background in hospitality. With 11 employees and annual sales experiencing double digit growth, van Hamond calls his Miami Produce District company small, but with a big commitment to quality.

“We like to refer to ourselves as the ‘better beverage company’ because we don’t do sodas, but nectars and other products packed with nutritional value,” he says.

Besides its flagship product, Expressed™ Juice, which offers blends of colorful, fresh juice in seven flavors, the company also makes Mixology Maker, a range of cold-press cocktail mixers originally developed for use behind hospitality industry bars that has now expanded into liquor stores throughout South Florida, followed by a national rollout.

It all began in van Hamond’s South Beach kitchen, where his kids would ask him for daily fresh juice, which he says is more prevalent in Australia than in the U.S.

Making those blends at home inspired the idea for a new venture: a cold-pressed juice franchise. He later pivoted back to his roots in hospitality, to supply

## Expressed Juice's Landfill-Biodegradable Bottles Withstand HPP Pressure

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the food service sector for Florida's hotels and cruise lines.

To succeed, van Hamond needed a way to keep his product fresh throughout distribution in a geographic region ranging from West Palm Beach, Fla. down to the Florida Keys, without the need for preservatives or heat pasteurization. Early in his quest for quality, he discovered HPP technology, pioneered by HPP machine builder Hiperbaric, which maintain offices in Doral, Fla., just outside Miami.

"It was an easy way for me to learn about HPP," van Hamond says.

After discovering how the technology renders pathogens in food inert without compromising taste, it was a "no-brainer" for Drinks to use HPP to launch Expressed Juice, its first brand.

"The best juice I can make is right now right in front of me in my kitchen," van Hamond says. "The next best is with HPP."

### **Building a brand around a bottle**

Van Hamond's first bold move was to reduce container size. "Everyone in Florida seemed to be doing 16-oz bottles of juice, which for me is a significant amount of liquid," van Hamond says. "So, we decided that we would go under the market and bring it to what I think is more acceptable to the consumer, which is a 12-oz size."

Then, van Hamond reached out to Captiva Containers, a custom container business founded in 2013 with ties to Hiperbaric who had also entered the market during the specialty beverage boom. Most of Captiva's clients are small- and medium-sized companies in the HPP sector.

"We have hundreds customers on a monthly recurring basis and at least 60

percent use HPP," says Leon Morgenstern, chief operating officer at Captiva Containers.

Captiva worked with Drinks to design the Expressed Juice bottle using food-grade polyethylene terephthalate (PET) plastic, a highly flexible material that can withstand the high pressure of the HPP chambers. Then began the quest for the rigidity ratio.

"The bottle had to be somewhat flexible, but not too flexible," Morgenstern says. "In the HPP process, pressure is applied all around the bottle, so material distribution and wall thickness are key."

The bottle's closure also needed to withstand HPP, while preserving the bottle's thread and neck finish with perfect compatibility.

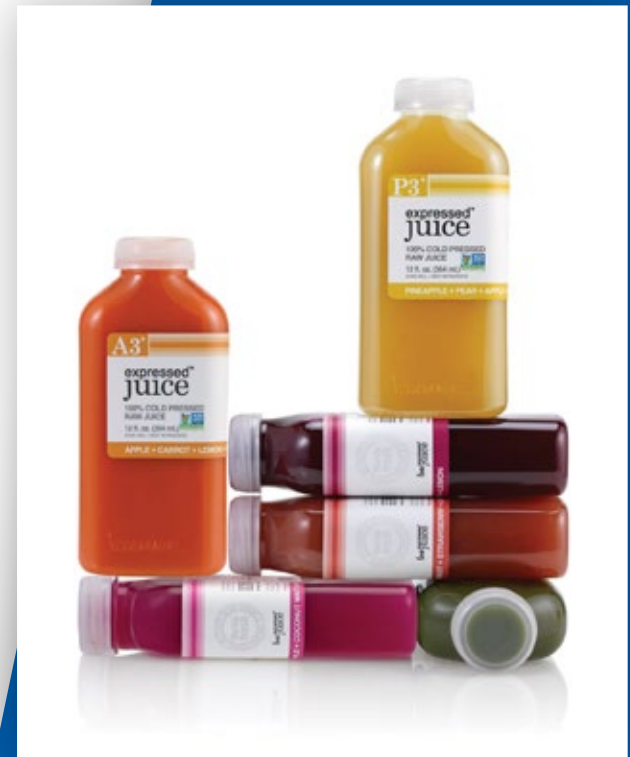
"We got a lot of guidance from Hiperbaric, and through some trial and error, we learned our way to what a successful HPP bottle design requires," Morgenstern says.

To sell juice in upscale markets, the Expressed Juice bottle also needed a design with strong shelf appeal. "We wanted to build a brand around the bottle," van Hamond says.

For inspiration, van Hamond looked to old-school medicinal bottles, which seemed to work well with a marketing plan he was simultaneously concocting in his kitchen, based on the nutritious ingredients in his juices.

"I would write the names of the juices in shorthand, like K-8, which has kale and eight other ingredients," van Hamond says. "We ended up using letter codes for our Expressed Juice products, which reminds

After discovering how the technology renders pathogens in food inert without compromising taste, it was a no-brainer for The Drinks Co. to use HPP to launch Expressed Juice, its first brand.





consumers of vitamins.”

The product needed to look edgy and new. “It’s a lot of fun—we came up with a bottle that is a hybrid between a bourbon flask and a cough syrup bottle,” van Hamond says. “And it fits in your back pocket.”

The flat front of the Expressed Juice bottle acts as a picture frame, displaying the brightly colored juice content inside to maximum effect.

“With a round bottle, you only see a quarter of the product,” van Hamond says. “But when you have eight of our Expressed Juice bottles sitting side-by-side on a shelf, you see the whole front and it creates great visual appeal.”

### Green challenge

Expressed Juice—delivered in Captiva’s innovative bottle and using Hiperbaric’s HPP technology to reach a shelf life of up to 45 days—was taking off.

Then in 2018, another ingredient was added to the mix. Van Hamond got a call from one of his top clients, a luxury hotel, saying that they would be going plastics-free across the board. “Basically, we had to reinvent our packaging,” van Hamond says.

With the notion that about 85% of plastic bottles go into landfills, Captiva’s solution was EcoClear, an additive it makes to help PET plastic break down faster in landfills.

“EcoClear increases the appetite of microbes in a landfill to absorb or consume the plastic packaging,” Morgenstern says. “Bottles with EcoClear can degrade up to 30 times faster than other plastic bottles in a landfill.”

Morgenstern says EcoClear has several advantages. Only a small percentage of material is added during blow molding, enough to make it biodegrade in a landfill but also allowing it to be recycled. "And it only degrades in a landfill environment, not on store shelves," he says.

### Under pressure

After receiving injection stretch blow molded bottles with EcoClear from Captiva, Drinks bottles Expressed Juice on its proprietary automated in-line filling, capping, and labeling machines.

The bottles feature a clear, tamper-evident closure from Silgan Closures that met Captiva's specifications to work with the bottle to handle the high pressure of HPP vats.

"It's a double seal screw top, with a double locking function—a plug on the inside of the cap and an outer lock along the thread so that process water

**Seafarers Inc,**  
a Miami based  
processor, importer,  
and marketer of  
fresh and frozen  
food and beverages  
(specializing in  
seafood), uses a  
**Hiperbaric 300 HPP**  
machine to process  
juices from The  
Drink Company.



will not get in," Morgenstern says.

Drinks works with a custom labeler, Pro Label, who developed a three-sided, peel-off label that provides further aesthetic appeal and promotes easier bottle reusability by the consumer.

The sealed and capped bottles are then shipped to the toller (see sidebar below), Seafarers, Inc., a Miami-based food processor specializing in seafood, who own a Hiperbaric 300 HPP machine for the final step of processing.

Seafarers first places the filled bottles into the Hiperbaric 300's cylindrical canisters, which are then sent into a high-pressure vessel that is flooded with cold water (4-25°C) that removes air, says Vinicio Serment, U.S. Applications Manager for Hiperbaric.

"Once flooded, high pressure pumps inject up to an extra 15 percent water volume into the full vessel to raise pressure up to 87 kpsi [87,000 lbs/sq in], which is equivalent of submerging foods close to 200,000 ft under the sea if this depth would actually exist."

Such pressurization of the bottles, which Seafarers runs for three minutes at 87 kpsi, inactivates most pathogens, such as listeria, e-coli, and other bacteria.

"It leaves the nutritional value intact and does not have any change on the product's color or on the palette," van Hamond says.

Van Hamond says he is proud of not only of how his product tastes but how the packaging looks and feels. "This packaging is like my fourth child," he says.

The industry also has taken note of the packaging: Drinks picked up a 2019 InnoBev Award in the Best PET Packaging category for its Expressed Juice bottles.

Morgenstern attributes the success of Expressed Juice's container in all

its aspects—strength, aesthetics, and friendliness to the environment—to the close working partnership forged between The Drinks Company, Captiva Containers, and Hiperbaric.

“It’s a combination that is not that common in the market,” Morgenstern says. “But it translates into something positive for the environment and the end consumer appreciates it.”

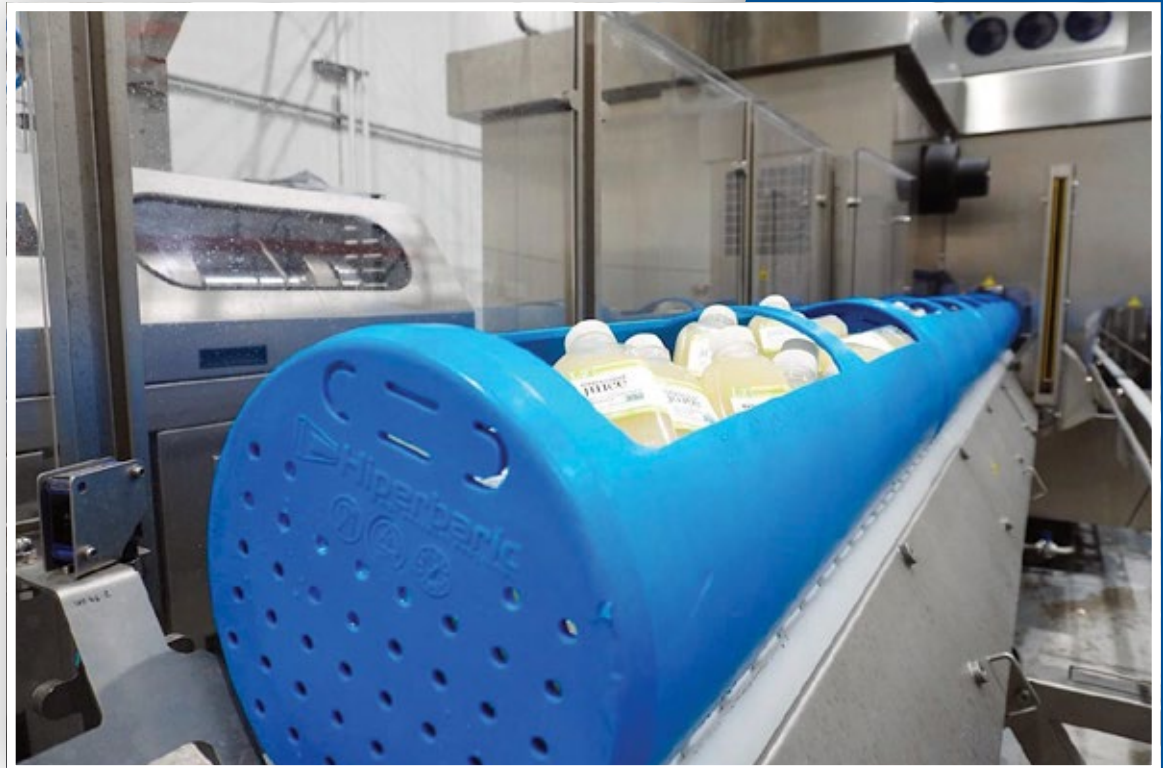
### Pandemic pivots

Up until March 2020, Drinks was distributing to hotels and cruise ships, largely focused on its B2B business model. “We had trucks on the road that were loading three cruise ships a week,” van Hamond says.

But when the COVID-19 pandemic hit, it disrupted Drinks’ operations, as it did so many others. “We had a sharp downturn starting in March—an 82% decline—when every hotel and cruise line shut its doors,” van Hamond says.

Drinks had to get creative to stay afloat. They shelved product

Expressed Juice bottles awaiting High Pressure Processing (HPP).



innovation in 2020 to focus on a new area: expanding distribution to supermarket consumers at chains like Milam's, which has five stores in greater Miami. "We're focused on keeping our pricing as tight as possible for the consumers," he says. "The days of the \$10 juice bottle are gone."

E-commerce also helped carry the company through. "We actually had a lot of consumers reach out to us, so we're now shipping nationwide," van Hammond says. Having improved shelf stability thanks to HPP sure helps that venture.

In 2021, Drinks is looking to get back to its plans of expanding its B2B distribution within Florida and possibly launch a new product. Van Hamond did not reveal what the new line is, saying only that packaging will again figure prominently in branding. -PW

# Emerging Brand Debuts First 100% Recyclable Ice Cream Carton

**Sacred Serve plant-based gelato uses a unique paperboard ice cream carton design that is now made from 100% virgin, food-safe paperboard and a food-safe, water-based barrier coating.**

*By Anne Marie Mohan*

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**S**acred Serve, a four-year-old company producing handcrafted, plant-based gelato, is on a mission to prove that “all food can, and should, be more healing than harmful to both our bodies as well as the planet.” As part of its credo to protect Mother Nature, the company is extremely conscious of the environmental impact of the packaging it uses as well. In February, Sacred Serve became the first to offer a 100%-recyclable, plastic-free ice cream carton that is also biodegradable and compostable.

The new packaging is a more sustainable version of the unique carton style the Chicago-based company has used since launching its vegan gelato line. Sacred Serve founder and CEO Kailey Donewald describes the paper-based package as a “cross between a noodle-box top and a traditional ice-cream tub bottom, with an integrated one-piece closure style.” The unusual style was chosen, she explains, to mirror the distinctiveness of the company’s



product versus other plant-based frozen treats on the market.

Among its novel features, Sacred Serve gelato uses functional ingredients, such as superfoods, adaptogenic herbs, and medicinal mushrooms, it is sweetened with unrefined, low-glycemic coconut sugar, and it gets its rich and creamy texture from the fiber of young coconut meat, rather than from high fat-to-sugar ratios or gums and stabilizers.

Donewald says the one-piece carton was also chosen because the design reduces the amount of packaging versus a traditional pint container, as it eliminates the need for a separate lid. As is standard for paper-based packaging for frozen products, the carton for Sacred Serve's ice cream originally used a polyethylene coating to protect it from moisture and withstand freezer temperatures, making the packaging non-recyclable.

"I first learned there were no plastic-free, sustainable options when I was sourcing our very first packaging," Donewald explains. "I worked tirelessly to find an alternative. I wound up finding various solutions that were plant-based or contained

**Sacred Serve gelato is available in Matcha Mint Chip, Chaga Chocolate, Coconut Salted Caramel, and Saffron Chai Spice varieties.**



## Emerging Brand Debuts First 100% Recyclable Ice Cream Carton

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Kailey Donewald,  
founder and CEO,  
Sacred Serve

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less plastic, but nothing truly plastic-free. I also struggled at the time as our old packaging supplier was unwilling to work with the upgraded paperboard I was wanting due to our limited quantities as an emerging brand.”

She adds that while she looked at other options besides a paper-based package, she didn’t feel comfortable using an all-plastic container, regardless of its recyclability. “It’s no secret what plastic waste has done to our environment and the health of all those who inhabit it, including humans,” she says. “Microplastics are becoming a huge environmental and health concern as well, and I believe it’s extremely important to remove this from the supply chain entirely. The bulk of plastic found in the environment is from CPG packaging waste.”

Sacred Serve’s new 10-oz carton is made from a 100% virgin-fiber, food-grade paperboard, with a food-safe, water-based barrier coating. Her search for a plastic-free alternative led her to Delipac, a U.K.-based packaging producer that spent eight years researching and developing plastic-free, paperboard packaging for food and beverages. A variation on the Delipac Cup, Sacred Serve’s new 10-oz carton is made from a 100% virgin-



fiber, food-grade paperboard, with a food-safe, water-based barrier coating. The material is certified as being 100% recyclable in any waste stream, 100% compostable in both home and industrial environments, and 100% biodegradable in marine and soil. It is also certified as being free of any harmful or toxic substances, including PFAS (polyfluoroalkyl substances), and the paper is PEFC- (the Programme for the Endorsement of Forest Certification) certified and carbon-balanced.

Sacred Serve worked with Midland Paper Co. to source the Delipac container in the U.S. Shares Donewald, the carton is multicolor offset-printed by a “Swedish-owned international paperboard specialist based in the U.K.”

Having made the switch to the 100% recyclable ice cream carton, Sacred Serve is committed to educating consumers on the sustainability of its carton and the non-recyclability of traditional ice-cream containers. On-pack communications advise consumers to recycle or home-compost the package, and Sacred Serve shares these messages on social media and on its website, as well.

Donewald says consumers are extremely excited



## Emerging Brand Debuts First 100% Recyclable Ice Cream Carton

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about the new packaging, and retail buyers have been quick to embrace the company due to this innovation. Sacred Serve gelato, in Matcha Mint Chip, Chaga Chocolate, Coconut Salted Caramel, and Saffron Chai Spice varieties, is sold across the Midwest and Southeast and in California, in Whole Foods Market, Erewhon Market, Plum Market, Earth Fare, Sunset Foods, and independent grocers. Nationwide shipping is also available from the Sacred Serve website.

# A Nestle First in Recycled Content

**Nestle and a coalition of companies have collaborated to produce what they are calling Australia's first flexible film food wrapper made with recycled content.**

*By Pat Reynolds*

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**T**he Amcor flexible film was printed and converted by Amcor. The prototype KitKat wrapper demonstrates the opportunity to close the loop on recycling flexible packaging. The new wrapper was developed using Amcor's expertise in incorporating recycled content into its packaging. The company also has a strong track record of innovation to deliver more recyclable solutions for its customers.

Partnering together, Amcor, Nestlé, CurbCycle, iQ Renew, Licella, Viva Energy Australia, LyondellBasell, REDcycle, and Taghleef Industries all leveraged their individual expertise in collecting and processing the flexible film waste to create the prototype wrapper, which is made with 30% recycled polypropylene.

"This is an exciting time for Amcor, and our participation in this project is fully aligned with our commitment to ensure all our packaging is designed to be recyclable or reusable by 2025," says Simon Roy, Vice President & General Manager Amcor Flexibles Australia & New Zealand. "As a global



## A Nestle First in Recycled Content

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leader in consumer packaging, we were proud to contribute our expertise in designing a structure that meets consumer needs and has a responsible end of life where it can be reprocessed and reused in food-grade packaging.”

Sandra Martinez, CEO of Nestlé Australia, points to this launch as solid evidence that there is a pathway to solving the challenges of recycling flexible packaging materials. Brand owners like Nestlé, she adds, will play a key role in driving demand for such food-grade recycled materials and creating market conditions that will ensure all stakeholders throughout the value chain view these materials “as a resource and not waste.”

**Nestle Australia teamed up with Amcor and a number of other partners to develop this film wrapper made of 30% recycled PP.**

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# Bio-based Potato Starches Replace Bag's LLDPE Sealant Layer

**In the new lamination, 16% of the complete structure, a sealant layer formerly composed of LLDPE, has been replaced with plant-based material that in fact is a byproduct of the French fries the company produces.**

*By Matt Reynolds*

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**D**riving toward a goal of using more sustainable materials in packaging, two Alexia Organic Potatoes brand products from potato producer Lamb Weston will use corn and potato starch in their packaging beginning in April 2021.

The packaging is partially made of potato starches, a byproduct of producing French fries. Research by GlobalData (March 2021) indicates more than 3 in 10 U.S. consumers believe environmentally friendly packaging material is a key driver of a purchase.

Alexia's Organic Sweet Potato Fries and Organic Yukon Select Puffs will feature a special seal, identifying the plant-based packaging. Lamb Weston's packaging team spent two years collaborating to create a sustainable packaging alternative and continue working to expand their sustainable packing efforts.

“Sustainability is a pillar of our packaging innovation strategy. By combining efforts with teams across the business we were able to create something innovative that will not only help reduce our carbon footprint, but also continue to deliver to our customers,” says Deb Dihel, Vice President of Innovation.

The new bag material lamination replaces a legacy oriented polypropylene (OPP) bag with LLDPE sealant layer.

“The bio-material is replacing LLDPE of our sealant layer,” says Casey Bettendorf, Senior Mgr Packaging Engineering on the Innovation Team. “OPP has proven to have many advantages that support our retail business, from its machineability to graphics. This effort is to reduce our footprint by utilizing more renewable resources at this point. Work is underway to expand this concept into a fully recyclable design.”

In the new lamination, 16% of the complete structure has been replaced with plant-based material. Annualized across both items equates to removing 8,928 lbs of PE and replacing it with bio-based material and a 6.5-ton reduction in CO2 emissions.

“Lamb Weston has a robust supply chain. We had to make sure that the structure could meet all of our quality and operational requirements,” Bettendorf says. “Packing French fries using v/f/f/s [vertical form/fill/seal] tends to put



## Bio-based Potato Starches Replace Bag's LLDPE Sealant Layer

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a lot of stress on our material so good seals, puncture, and tear resistance is critical to ensure we can provide a quality product to our customers.

Converter and flexible packaging supplier American Packaging Corporation (APC) provides the flexographically printed rollstock for this application.

According to APC, the environmental impact annually\* of using a packaging substitute for the Alexia Organic Potato equates to:

- 14,700 miles driven
- 252 trash bags in landfill
- 750,000 phones charged
- 98 trees over 10 years
- 14 barrels of oil

*\*Utilized 3.0 mil LLDPE (low density polyethylene) sealant film with 20% biomaterial by weight. 6.5 reduction in net CO2 emissions.-PW*

