



TOPIC: SUPPLY CHAIN, ENVIRONMENT

## CUTTING PLASTICS FROM BREWING

🕒 11 min read

Growing concern over single use, fossil-fuel based plastics is prompting brewing companies worldwide to take another look at packaging and source more environmentally friendly and sustainable alternatives.

Supermarkets, retailers and big brands throughout the fast-moving consumer goods sector are all actively looking to address their environmental impact. Even LEGO, the global children's toy made from plastic, is looking to reduce its plastic packaging with a recently announced pledge to begin eliminating single use plastic packaging from their products starting this year.

Certainly, growing awareness of environmental issues is allowing brands that lead change to differentiate themselves from their competitors and create a market advantage. For example, the UK's Brewdog craft brewery recently became the world's first carbon-negative brewing enterprise, becoming a leader in the brewing industry.

### Disposing of plastic ring toppers

Recognising the imperative to reduce plastic, leading brewing brands have announced a swathe of measures aimed at cutting plastics from their packaging, frequently turning to technical innovation as they move to tackle their contribution to plastic waste.

Diageo, for example, made a high profile switch away from plastics last year in a program removing ring carriers and shrink wrapping on premium brands such as Guinness. Starting in Ireland, other key Diageo brands like Harp and Smithwicks are due to follow in using 100% recyclable and biodegradable cardboard-based pack binders in the coming months. The switch necessitated a £16 million investment in new equipment and is expected to reduce Diageo's plastic usage by more than 400 tonnes a year.

In a separate development, Diageo's Guinness Open Gate Brewery located in Baltimore, MD, announced that all its limited release canned multipacks will also be sold in biodegradable carriers made from by-product waste and other compostable materials.

The plan to reduce plastics has been several years in the making. In mid-2018 Diageo announced an ambitious set of targets for use of plastics including that 100% of plastics used should be widely recyclable by 2025 and plastic bottles should be made of 100% recycled content by 2030. Further global targets for 2025 include achieving a 40% average recycled content in plastic bottles – and 100% by 2030. In its latest sustainability report Diageo claims to have ensured that over 99.5% of its packaging is recyclable and achieved an overall 45% recycled content. According to the company, currently less than 5% of Diageo's total packaging by weight is plastic.

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"Our new ambitious plastics targets build on almost a decade-long commitment to making our packaging more sustainable. We know we cannot do this alone and we look forward to collaborating with our packaging suppliers, industry peers and government leaders to innovate," said David Cutter, Diageo's Chief Sustainability Officer and President, Global Supply and Procurement, in a statement.

This summer Diageo launched Pulpex Ltd, a partnership between the drinks giant and venture management group Pilot Lite. The tie-up will pioneer the launch of the world's first spirits bottle made from sustainably-sourced wood pulp and containing zero plastic. The new PET-free bottle is scheduled to debut early 2021 with the Johnnie Walker scotch whisky brand.

The Pulpex sustainable packaging technology company has established a partner consortium of non-competing companies, including Unilever and PepsiCo. Consortium partners are also expected to launch their own branded paper bottles in 2021.

### **Carlsberg to stick with beer**

Carlsberg has also moved to reduce plastic ring tops, but rather than using cardboard materials has chosen a different approach. In September 2018 the Danish brewing major announced the launch of a new glue technology to replace plastic wrapping. The so-called Snap Pack holds cans of Carlsberg Danish Pilsner, Carlsberg Expørt, Brooklyn Lager and San Miguel, with the company claiming the move reduces the amount of plastic used in traditional multi-packs by up to 76% saving up to 1200 tonnes a year of plastic when fully implemented.

Just over a year later, the company followed this with a beer bottle made from sustainably-sourced wood fibres that is both 100% bio-based and fully recyclable, a key part of its sustainability programme dubbed "Together Towards ZERO."

One prototype uses a thin recycled PET polymer film barrier, and the other a 100% bio-based PEF polymer film barrier. These prototypes will be used to test the barrier technology as Carlsberg seeks a solution to achieve their ultimate ambition of a 100% bio-based bottle without any fossil-based polymers.

In a conversation with First Key Consulting, Simon Hoffmeyer Boas, Senior Director of Sustainability at Carlsberg Group, says, "In our opinion all packaging can be made more sustainable. When you look at the different types of packaging we are using, everything from cardboard boxes to plastic wrapping to aluminium cans, glass bottles, PET bottles, our strong conviction is that any type of packaging can be made more sustainable. You can reduce the amount of material and you can make sure it is recycled more, you can use more recycled content and you can change to a different material or you can re-think the whole approach, which could entail a reusable model. We are totally open to employ any of these measures."

Boas continues: "Our Snap Pack is an example of a radical reduction of packaging material with the lowest possible carbon footprint and an amazing packaging innovation. The way I see it, the best packaging is the one you don't use."

Carlsberg started its work on their paper bottle in 2015, and was recently joined by a number of major brands, joining The Coca-Cola Company, The Absolut Company and L'Oréal in a paper bottle community. These brands will work with paper bottle company Paboco, a joint scale-up venture between paper packaging materials and solutions provider BillerudKorsnäs and bottle manufacturing specialist Alpla.

"Having very ambitious sustainability targets also means that we have made a statement to the outside world, including the suppliers, the partners, the universities and start-ups who then know that we are interested in solutions that can help reduce the carbon footprint and reduce materials usage," says Boas.

### **Global giants turn to technology**

The world's largest brewing company, Anheuser-Busch InBev, has also revealed a sustainability strategy for packaging. Their plan targets a 100% recyclable or majority made from recycled content for all of the company's products by 2025. Starting from a 46% baseline.

AB InBev's sustainability journey accelerated in 2012 with a commitment to remove 100,000 metric tons of packaging material globally. It exceeded this goal in 2016, removing 146,000 metric tons of material from packaging and working at breweries around the world to achieve an average 98% recycling rate. In 2019 the company launched a 100% recycled shrink wrap packaging for its Jupiler brand in Belgium, for example.

AB InBev's environmental policy states that its products will be produced in "the most environmentally responsible way" and the company is working with multiple partners, including the Ellen MacArthur Foundation, as well as looking at new technologies.

Budweiser Brewing Group in the UK previously announced a £6.3 million (US\$8 million) investment in a new technology that will allow it to eliminate plastic rings from UK-produced major brands like Stella Artois, Budweiser and Bud Light. Technology installed at Budweiser Brewing Group's breweries in Magor, South Wales, and Sarnesbury, Lancashire will replace ring toppers and shrink wrap with recyclable paperboard packaging. A major part of this initiative is the use of Keel Clips™ developed by Graphic Packaging International which uses recyclable paperboard to create a lighter weight pack. In October, Budweiser announced that removing the rings will cut out 250 tonnes of plastic every year and, combined with decreasing its usage of plastic shrink wrap, the brewer has removed 850 tonnes of plastic waste from its supply chain.

"We need technology that can be scalable, as well as efficient to keep up with demand. This new packaging will allow us to produce up to 2,000 cans per minute in a recyclable paperboard clip. We will be reconfiguring our entire canning production lines in both of our main breweries to introduce this machinery and expand overall paperboard packaging capacity, so that we can ensure all plastic rings are eliminated," said Elise Dickinson, Head of Innovation at Budweiser Brewing Group UK&I, in a statement.

The announcement comes as Budweiser Brewing Group partners C&C Group revealed plans to remove all single-use plastics like ring toppers and shrink wrap across its Irish and British cider portfolio by 2022. Following a combined €11.5 million (US\$12.9 million) investment in new equipment at the Wellpark, UK, and Clonmel, Eire, production sites, brands like Magner's and Orchard Pig will be packaged in recyclable paperboard. This investment will remove almost 250 tonnes of plastic from the supply chain every year.

### **Green grips Heineken**

The global number two, Heineken announced that it is to introduce a novel pack topper to replace conventional plastic rings. Dubbed Green Grip and manufactured from FSC-certified cardboard reportedly supplied by Spanish packaging group Alzamora, the replacement will be initially launched in the UK on the company's Heineken, Fosters and Kronenbourg 1664 brands. By the end of next year, the strategy will eliminate plastic from Heineken products found on supermarket shelves and will subsequently roll out across the entire beer and cider range.

Piloted at Heineken UK's Manchester brewery following a £22 million (US\$28 million) investment, UK sites at Tadcaster and Hereford sites are set to follow in March 2021 before the pack topper is rolled out across other international markets.

"Despite major operational challenges caused by the ongoing pandemic, we successfully launched Green Grip with Heineken®, Foster's and Kronenbourg 1664 by installing and commissioning the first machine at our brewery in Manchester. Roll out will continue in 2021 with the aim of transitioning our entire beer and cider portfolio into Green Grip," says Joanna Dring from Heineken.

"Once complete, we will have eliminated plastic rings and shrink wrap from our multipack cans completely, saving over 500 tonnes of plastic each year. The initial feedback from consumers and customers has been very positive. We continue to focus our efforts on making all our packaging recyclable and reusable. We are due to trial increasing recycled plastic content in (tertiary) shrink wrap and PET," she added.

In September Heineken also announced a pilot scheme featuring automated dispensers in major stores. The 'Fresh Draught To-Go' scheme dispenses locally produced chilled beer in reusable 950 ml glass bottles. Initially rolled out in retail stores across four national markets, the scheme started in France in partnership with local brewery Gallia Paris.

### **Across the pond with Molson Coors**

North American brewing giant Molson Coors unveiled its 2025 sustainability targets in 2016, for example outlining plans to eliminate waste to landfill, including plastics. By the end of 2018, every major Molson Coors brewery had achieved this goal. A new plastic-specific strategy was announced last year which added three new goals to the company's 2025 sustainability targets. These include making all of its packaging reusable, recyclable, compostable or biodegradable, incorporating at least 30% recycled content in its plastics packaging and improving recycling infrastructure.

In the UK, Molson Coors has set a goal of removing plastic rings from Carling and Coors Light cans by the end of March 2021, switching to recyclable cardboard sleeves. The UK business also removed the plastic wrap from large multipacks earlier this year 2020, switching to cardboard packaging alternatives.

As part of a small test in Colorado, AC Golden, Molson's craft beer brand Colorado Native is testing a new plastic-free alternative to ring toppers created by packaging solutions company Footprint. The fiber-based six-pack rings are manufactured from post-industrial recycled fiber and are 100% bio-based, recyclable and compostable. Launched in June 2019, six-packs are being tested at a Denver-area retailer on four of its Colorado Native beers.

The pilot is a limited-time program that will help MillerCoors gauge long-term viability.

Molson Coors says it is also working on packaging tests and delivery model pilots in other markets as part of its goal to reduce its carbon footprint and the amount of plastics in packaging.

### **Small but perfectly formed**

While giant brewing companies are able to mobilise resources that may not be available to smaller players, even the smallest craft brewers are engaging with the plastic-free revolution.

The E6PR group, for instance, is offering its ring toppers to smaller operators without tens of millions of dollars available for a major investment in packaging technology. Made from by-product waste and other compostable materials, the E6PR™ (Eco Six Pack Ring) replaces the ring topper with a compostable alternative that can be disposed of with green waste. Even when disposed of improperly and thrown on open land or in water, the E6PR™ product will degrade in less than 200 days, the company says. E6PR also offers applicators for the toppers, including a manual version for even the smallest brewing companies. In Canada, La Souche Microbrasserie, located in Quebec, and Big Spruce Brewing in Nova Scotia are just two of the craft breweries that are benefitting from the sustainable packaging initiative.

With the growing weight of evidence that single use, fossil-fuel plastics are wreaking huge damage on our world, consumer brands are rapidly cleaning up their act which is helping mitigate waste in their regions. While many breweries are leading the way in this movement, there is still much room for improvement in the recycling industry itself. Along with carbon and water use, brewing companies both large and small can address plastics in packaging and set out on the road to sustainable production.

By David Appleyard