

Companies join forces to help tackle plastic waste with BP's enhanced recycling technology

19 December 2019

- New cross-industry consortium to make enhanced recycling of polyester plastics a commercial reality, contributing to the development of a global circular economy for plastics.
- BP technology targets opaque and difficult-to-recycle PET plastic waste, such as highly-coloured bottles and food trays.

Leading companies operating across the polyester packaging value chain – including businesses involved in the manufacture, use, collection and recycling of polyethylene terephthalate (PET) plastic packaging – today announced they have formed a new consortium that aims to help to address the problem of plastic waste by accelerating the commercialisation of BP Infinia enhanced recycling technology.

BP Infinia is designed to turn opaque and difficult-to-recycle (known as ODR) PET plastic waste, that can degrade in quality each time it is recycled using conventional methods, into recycled feedstocks that can be used to make new high-quality PET plastic packaging again and again, with no loss in quality.

The consortium intends to combine the capabilities and experience of its members – packaging and recycling specialist ALPLA; food, drink and consumer goods producers Britvic, Danone and Unilever; waste management and recycling specialist REMONDIS; and energy and petrochemicals producer BP – to develop a new circular approach to dealing with PET plastic waste.

PET is a plastic widely used for rigid food packaging and drinks, personal care and homecare bottles. It is a lightweight, durable and versatile material and one of the most collected and recycled types of plastic (1). Of the PET plastic bottles collected globally, more than 75 per cent are recycled, but only 12 per cent of those collected make it back into new bottles (2). The remainder is currently lost from the bottle-to-bottle loop (3), as it is used for other applications which are usually disposed of directly after use to landfills or incinerators due to lack of separate collection.

The consortium members believe by joining forces they can speed up the commercialisation of the technology, infrastructure and demand needed to process billions of opaque and difficult-

to-recycle PET bottles and food trays that are currently disposed of each year, including those that are difficult to recycle by current conventional recycling methods (4).

It is the intention that each member of the consortium will contribute resources and distinctive capabilities and experience in areas such as waste management and recycling, technology development, intermediate processing and product design to develop a business model that takes into consideration the infrastructure, supply chain and demand requirements of all parties that will be involved in creating a circular economy for polyester and PET plastic.

In October 2019, BP announced plans to construct a \$25 million pilot plant in the US to prove the technology on a continuous basis before progressing to full-scale commercialization.

Other parties may join the consortium in the future to complement the expertise of the founding members.

Notes:

1. Source: Ellen MacArthur Foundation: The New Plastics Economy, Napcor.
2. Source: BP calculations based on Wood MacKenzie Chemicals Data. PET collection rates are based on bottle consumption alone; of the 27 million tonnes of PET produced for food and drinks packaging, 23 million tonnes is consumed as bottles and 4 million tonnes as thermoformed products, such as food trays. In 2019, it is estimated that some 13 million tonnes of bottles are collected globally and converted into 10 million tonnes of post-consumer resin. Of that, 1.6 million tonnes is used for bottles.
3. Recycling a PET bottle back into a new PET bottle.
4. Source: BP calculations based on production of recycled PTA from multiple facilities – amounting to a scale equivalent to a typical virgin PTA plant of around 1 million tonnes – would require total feedstock of many millions of tonnes of opaque and difficult-to-recycle PET packaging. Based on the average weight of specific packaging types suitable for this technology (from 10 to 30 grammes), this feedstock would equate to billions of packaging items.

Quotes

Georg Lässer, Head of Recycling at ALPLA: “ALPLA is delighted to join this cross-functional project with partners from the entire value chain. It completes our intense activities besides mechanical recycling and focuses on post-industrial PET waste, difficult to recycle PET packaging and PET thermoform trays. With BP in the lead, we have a very strong and highly experienced partner that contributes with knowledge about virgin polyester production.”

Rita Griffin, BP Chief Operating Officer, Petrochemicals: “This is an exciting step towards a circular economy for the polyester industry. BP is experienced in developing and scaling up technology and we’ll do this again with our innovative BP Infinia process. But we know we cannot create circularity on our own. That’s why we are thrilled to be working together with

industry leaders to develop and prove a practical business model that can hopefully contribute to making all types of polyester waste infinitely recyclable.”

Trystan Farnworth, Director of Sustainability at Britvic: “To truly reinvent Britvic’s packaging, we must innovate with new low-impact packaging. This consortium is a cornerstone to delivering that pledge. A challenge in creating a truly circular economy for PET is the fact that, as it stands, it is not infinitely recyclable. We have to solve this to become truly circular – it is not an option. That’s why we are excited to announce our active role in the consortium, collaborating to achieve a circularity breakthrough for the benefit of all our stakeholders.”

Katharina Stenholm, Danone’s SVP, Chief Cycles & Procurement Officer: “Packaging is essential to ensure food safety and to reduce food waste, but it presents an environmental challenge. At Danone we commit to ensuring that our packaging will be 100% recyclable, reusable or compostable by 2025 and that our water and other beverages bottles will contain 50% rPET by then. We keep joining forces with partners and pooling expertise in order to develop innovative recycling solutions, create a second life for all plastics and thus accelerate the global transition towards a circular economy of packaging.”

Ralf Mandelatz, Managing Director of REMONDIS Recycling GmbH & Co.KG: “In order to implement material circularity in PET packaging, we need new technologies for packaging that can’t yet be mechanically processed. We want this material resource to return into the circular economy; chemical recycling complements mechanical recycling and provides further possibilities to sustainable resource management. REMONDIS intends to contribute its specialist experience in the field of sorting and PET processing to the other consortium partners leading this European project.”

Marc Engel, Unilever’s Chief Supply Chain Officer: “We’ve recently committed to halve our use of virgin plastic, reducing our absolute use of plastic packaging by more than 100,000 tonnes and accelerating the use of recycled plastic. We’ve also committed to help collect and process more plastic packaging than we sell by 2025. Joining this consortium is an investment in the future of recycling technology which is critical to keeping plastic in the loop. By working together, we can help accelerate the industry towards a circular economy.”

Notes to editors

About ALPLA Group

- ALPLA is one of the leading companies involved in plastic packaging. Around 20,800 employees worldwide produce custom-made packaging systems, bottles, closures and moulded parts at 178 sites across 46 countries. The high-quality packaging is used in a wide range of areas, including for food and drinks, cosmetics and care products,

household detergents, washing and cleaning agents, pharmaceutical products, engine oils and lubricants.

- ALPLA operates its own recycling plants in Austria, Poland and Spain, and in the form of joint ventures in Mexico and Germany. By signing the New Plastics Economy's Global Commitment in October 2018, ALPLA has committed to achieving targets by 2025: All packaging solutions are to be fully recyclable. The volume of recycled materials is to rise to 25 per cent of total material usage. 50 million euros is being made available for the expansion of recycling activities.

About BP Petrochemicals

- BP's petrochemicals business manufactures and markets products that are produced using industry-leading proprietary technology and are then used by others to make essential consumer products such as food packaging, textiles and building materials.
- BP has developed an enhanced recycling technology, BP Infinia, that enables currently unrecyclable polyethylene terephthalate (PET) plastic waste to be diverted from landfill or incineration and instead transformed back into new, virgin-quality feedstocks.

About Britvic Soft Drinks

- Britvic is one of the leading branded soft drinks businesses in Europe. The company combines its own leading brand portfolio including Fruit Shoot, Robinsons, Tango, J2O, Teisseire and MiWadi with PepsiCo brands such as Pepsi, 7UP, Arto LIFEWTR and Lipton Ice Tea which Britvic produces and sells in Great Britain and Ireland under exclusive PepsiCo agreements.
- Britvic is the largest supplier of branded still soft drinks in Great Britain and the number two supplier of branded carbonated soft drinks in Great Britain. Britvic is an industry leader in the island of Ireland with brands such as MiWadi and Ballygowan, in France with brands such as Teisseire, Pressade and Moulin De Valdonne and in Brazil with Maguary, Bela Ischia and Dafruta. Britvic is growing its reach into other territories through franchising, export and licensing. Britvic's management team has successfully developed the business through a clear strategy of organic growth and international expansion based on creating and building scale brands. Britvic is listed on the London Stock Exchange under the code BVIC and is a constituent of the FTSE 250 index.
- 100% of all Britvic bottles and cans are already recyclable and Britvic is committed to a further minimum 500 tonnes of plastic reduction in 2020 through light-weighting, on top of the 1,500 tonnes already removed since 2017.
- Britvic has announced £5 million of investment support to achieve a step-change in the use of virgin PET by the inclusion of more recycled PET in our bottles. This also supports the transition to a low carbon economy.

- Britvic has pledged to pursue bolder greenhouse gas (GHG) emission reduction targets by signing up to the Science Based Targets initiative. Britvic joins around 600 leading companies from around the world in formally committing to independently verified science-based GHG emission reduction targets.

About Danone (www.danone.com)

- Dedicated to bringing health through food to as many people as possible, Danone is a leading global food & beverage company building on health-focused and fast-growing categories in three businesses: Essential Dairy & Plant-Based Products, Waters and Specialized Nutrition. Danone aims to inspire healthier and more sustainable eating and drinking practices, in line with its 'One Planet. One Health' vision which reflects a strong belief that the health of people and that of the planet are interconnected.
- To bring this vision to life and create superior, sustainable, profitable value for all its stakeholders, Danone has defined its 2030 Goals: a set of nine integrated goals aligned with the Sustainable Development Goals (SDGs) of the United Nations. Danone commits to operating in an efficient, responsible and inclusive manner; it holds itself to the highest standards in doing business, as reflected by its ambition to become one of the first multinationals certified as B Corp™.
- With more than 100,000 employees, and products sold in over 120 markets, Danone generated €24.7 billion in sales in 2018. Danone's portfolio includes leading international brands (Actimel, Activia, Alpro, Aptamil, Danette, Danio, Danonino, evian, Nutricia, Nutrilon, Volvic, among others) as well as strong local and regional brands (including AQUA, Blédina, Bonafont, Cow & Gate, Horizon, Mizone, Oikos, Prostokvashino, Silk, Vega).
- Listed on Euronext Paris and on the OTCQX market via an ADR (American Depositary Receipt) program, Danone is a component stock of leading social responsibility indexes including the Dow Jones Sustainability Indexes, Vigeo Eiris, the Ethibel Sustainability Index, MSCI Global Sustainability, MSCI Global SRI Indexes and the FTSE4Good Index.

About REMONDIS

- REMONDIS is one of the world's largest recycling, service and water companies. With more than 30,000 employees working across 800 business locations over four continents, the group serves more than 30 million people and thousands of companies.
- REMONDIS handles huge volumes of materials, treating them and returning them to production cycles. Each year, we collect and process over 30m tonnes of recyclables so that they can be procured by industrial businesses as raw materials.
- REMONDIS is driven by their dedication and commitment for continuous improvement to recover and recycle new materials and optimise existing recycling systems. Many of the recycling processes REMONDIS use were developed and patented by themselves.

REMONDIS are pioneers within the recycling sector, setting the benchmark for “best in class”, working for the future.

About Unilever

- Unilever is one of the world’s leading suppliers of Beauty & Personal Care, Home Care, and Foods & Refreshment products with sales in over 190 countries and reaching 2.5 billion consumers a day. It has 155,000 employees and generated sales of €51 billion in 2018. Over half (60%) of the company’s footprint is in developing and emerging markets.
- In October 2019, Unilever, owner of brands including Dove, Ben & Jerry’s, Lipton and Omo announced ambitious new commitments to reduce its plastic waste and help create a circular economy for plastics. Unilever has confirmed that by 2025 it will:
 - Halve its use of virgin plastic, by reducing its absolute use of plastic packaging by more than 100,000 tonnes and accelerating its use of recycled plastic.
 - Help collect and process more plastic packaging than it sells
- This commitment makes Unilever the first major global consumer goods company to commit to an absolute plastics reduction across its portfolio.
- In 2017, Unilever committed to ensure all of its plastic packaging is reusable, recyclable or compostable by 2025, and to use at least 25% recycled plastic in its packaging, also by 2025.

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