P&G Teams With PureCycle on Novel PP Recycling Plant

Consumer products giant Procter & Gamble Co. has licensed its patented polypropylene recycling technology to PureCycle Technologies and the partners are jointly launching a $120 million plastics recycling plant in southern Ohio. P&G's technology is said to "restore used polypropylene plastic to 'virgin-like' quality with a recycling method that is one of a kind."

The 2-year-old PureCycle is a portfolio company of Innventure, a Wasson Enterprise Partnership that commercializes disruptive technologies. PureCycle is opening the feedstock evaluation unit in Lawrence County, Ohio, where it will calibrate the PP recycling process. The feedstock evaluation unit will begin operating in January 2018 and continue operations after the full-scale plant opens in 2020.

"This technology, which can remove virtually all contaminants and colors from used plastic, has the capacity to revolutionize the plastics recycling industry by enabling P&G and companies around the world to tap into sources of recycled plastics that deliver nearly identical performance and properties as virgin materials in a broad range of applications," said Kathy Fish, P&G's chief technology officer.

PureCycle CEO Mike Otworth added: "This is a case where a hundred-billion-dollar industry required new technology to meet a compelling, unmet need." The company pegs the global PP market at more than $80 billion, and cited market research that projects it will exceed $133 billion by 2023.

"In the U.S. alone, the demand for virgin-quality recycled PP is immense," said Steve Alexander, CEO of the Association of Plastics Recyclers. "APR has identified 1 billion pounds of recycled PP demand in North American alone," noting 720 million pounds of that demand is for what they would term "high-quality" recycled PP.

P&G said that the recycled resin from this initiative will be widely available for purchase across industries, with likely uses in used in automobile interiors, food and beverage packaging, consumer good packaging, electronics, construction materials, home furnishings, and many other products.

www.purecycletech.com and www.pg.com

Aquapak Opens New PVOH Polymer Plant in UK

Aquapak Polymers Ltd. has completed a multimillion-dollar, purpose-built manufacturing facility in Birmingham, England, to produce a proprietary flexible polymer based on polyvinyl alcohol (PVOH).

Aquapak Managing Director Mike Everard said the firm began manufacturing its specially formulated plastic pellets at the new plant in July. The facility has the capacity for five production lines with each producing up to 6,000 metric tonnes of pellets per year. All production lines are due to be operating at capacity by the end of 2017.

Mike Everard

The company, part of global engineering company adi Group, was established in 2011 and has invested millions of pounds sterling to develop this new polymer. Aquapak says the material offers the same function and performance of conventional plastics but is fully recyclable, biodegradable and harmless to marine life if it ends up in the waterways, where it eventually will dissolve.

The base polymer, PVOH, has been around for decades and has been used in laundry detergent pouches and as a lubricant in eye drops. However, Aquapak claims it has successfully overcome the barriers and difficult processing conditions traditionally associated with PVOH to radically improve its inherent strength so it can be used for a much wider range of applications.

The pellet has been designed to work with existing standard polyethylene processing equipment, so no initial investment is required by blown film manufacturers, and existing production lines can be efficiently repurposed as demand warrants.

Although Aquapak's polymer shares some characteristics with bioplastics, it is made from a petrochemical source. The company says this is intentional and forms a key part its long-term strategy.

Everard added: "Sustainable polymers or bioplastics still make up less than 10% of the total plastics market. One of the biggest disadvantages is they cost too much to produce. Using a petrochemical source for ours means it's cheaper to produce. ... Once demand reaches a critical mass, we will look at sustainable bio-based source for the material, but until then it just isn't financially viable."

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