Origin Materials and Husky Achieve Commercialization Milestone for Advanced Packaging

July 31, 2023

Recyclable PET polymer incorporating FDCA successfully processed into preforms using Husky's commercial-scale injection molding equipment and subsequently bottles

Novel hybrid polymer "PET/F" expected to deliver enhanced performance compared with traditional PET plastic and have up to 100% bio content

WEST SACRAMENTO, Calif. & BOLTON, Ontario--(BUSINESS WIRE)--Jul. 31, 2023-- Origin Materials, Inc. ("Origin" and "Origin Materials") (NASDAQ: ORGN, ORGNW), a leading carbon negative materials company with a mission to enable the world's transition to sustainable materials, and Husky Technologies ("Husky") , a pioneering technology provider enabling the delivery of essential needs to the global community, announced a milestone in the commercialization of PET (polyethylene terephthalate) incorporating the sustainable chemical FDCA (furandicarboxylic acid) for advanced packaging and other applications.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20230731962598/en/

Advanced co-polyester made by Origin Materials and Husky Technologies using PET/F. Resin, mold, and bottle shown. (Photo: Business Wire)

Origin successfully polymerized the bio-based sustainable chemical FDCA into the common recyclable plastic, PET, and Husky molded the resulting "PET/F" hybrid polymer into preforms that were then blown into bottles. The companies used Husky's injection molding technologies and manufacturing equipment, a commercial manufacturing-scale level of processing demonstrating the ability of PET/F, a polymer made with FDCA, to be integrated into existing PET production systems.

Origin expects to develop and sell a family of 100% bio-based, low-carbon PET/F polymers offering full recyclability and superior performance compared with traditional 100% petroleum-derived PET. Origin anticipates that PET/F will offer "tunable" performance, with properties like enhanced mechanical performance and superior barrier properties enabling longer shelf life controlled by adjusting manufacturing conditions and the quantity of FDCA copolymer.

This innovation demonstrates a pathway for the drop-in market adoption of FDCA to produce superior polymers cost-effectively from biomass using Origin technology. Origin expects to enable the production of FDCA, PEF (polyethylene furanoate), and PET/F at commercial scale using its patented technology platform, which turns the carbon found in sustainable wood residues into useful materials, while capturing carbon in the process.

"This is a key moment in the commercialization of cost-effective, low- carbon FDCA and PEF and the development of next-generation sustainable polymers generally. We believe these materials have the power to transform plastics and the material economy," said John Bissell, Co-Founder and Co-CEO of Origin Materials. "We are pleased to work with Husky, a trusted leader in injection molding technologies and polymer processing development, to achieve this performance milestone, showing the ready processibility of our innovative hybrid polymers using Husky's commercial-scale injection molding equipment. This is a major milestone in our effort to help transition the world to sustainable materials."

"Driving sustainability through innovation is at the core of how Husky has been leading the way in enabling the circular economy of plastics," said John Galt, CEO of Husky Technologies. "Preserving and protecting what matters, in even more sustainable ways is foundational to everything we do at Husky. Our collaboration with Origin Materials is an exciting example of combining material innovation with state-of-the-art polymer processing technologies."

FDCA is a chemical building block with diverse applications including polyesters, polyamides, polyurethanes, coating resins, and plasticizers. FDCA is also the precursor for the next-generation sustainable polymer PEF (polyethylene furanoate). By combining FDCA with PET, Origin has produced PET/F, a "tunable" hybrid polymer offering performance enhancements and full recyclability.

PEF, another product derived from FDCA, offers an attractive combination of sustainability and performance benefits for packaging. Origin's PEF is expected to be 100% bio-based, fully recyclable, have attractive unit economics, and offer a significantly reduced carbon footprint, with superior strength, thermal properties, and barrier properties compared to today's widely used petroleum-based materials.

About Origin Materials

Headquartered in West Sacramento, Origin Materials is the world's leading carbon negative materials company. Origin's mission is to enable the world's transition to sustainable materials. For over a decade, Origin has developed a platform for turning the carbon found in inexpensive, plentiful, non-food biomass such as sustainable wood residues into useful materials while capturing carbon in the process. Origin's patented technology platform can help revolutionize the production of a wide range of end products, including clothing, textiles, plastics, packaging, car parts, tires, carpeting, toys, fuels, and more with a ~$1 trillion addressable market. In addition, Origin's technology platform is expected to provide stable pricing largely decoupled from the petroleum supply chain, which is exposed to more volatility than supply chains based on sustainable wood residues. Origin's patented drop-in core technology, economics and carbon impact are supported by a growing list of major global customers and investors.

For more information, visit www.originmaterials.com.

About Husky Technologies

Since 1953, Husky Technologies™ has been pioneering technologies that enable the delivery of essential needs to the global community with industry-leading expertise and service. A global leader, Husky is powered by teams of exceptional people in more than 40 locations with valued customers who operate in over 140 countries. By focusing on sustainably sourced feedstocks, material reuse and the exclusive use of medical-grade polymers, Husky continues to be committed to enabling the circular economy now and into the future.

For more information, visit www.husky.co.

Cautionary Note on Forward-Looking Statements

This press release contains certain forward-looking statements within the meaning of the federal securities laws. Forward-looking statements generally are accompanied by words such as “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “expect,” “should,” “would,” “plan,” “predict,” “potential,” “seem,” “seek,” “future,” “outlook,” and similar expressions that predict or indicate future events or trends or that are not statements of historical matters. These forward-looking statements include, but are not limited to, statements regarding the bio-content, recyclability, unit economics, carbon footprint, strength, and thermal and barrier properties of the products discussed in this press release. These statements are based on various assumptions, whether or not identified in this press release, and on the current expectations of the management of Origin Materials and are not predictions of actual performance. These forward-looking statements are provided for illustrative purposes only and are not intended to serve as, and must not be relied on as, a guarantee, an assurance, a prediction, or a definitive statement of fact or probability. Actual events and circumstances are difficult or impossible to predict and will differ from assumptions. Many actual events and circumstances are beyond the control of Origin Materials. These forward-looking statements are subject to a number of risks and uncertainties, including that Origin Materials may be unable to successfully commercialize its products; the effects of competition on Origin Materials’ business; the uncertainty of the projected financial information with respect to Origin; disruptions and other impacts to Origin’s business as a result of outbreaks such as the COVID-19 pandemic, Russia’s military intervention in Ukraine, the impact of severe weather events, and other global health or economic crises; changes in customer demand; and those factors discussed in the Quarterly Report on Form 10-Q filed with the U.S. Securities and Exchange Commission on May 10, 2023, under the heading “Risk Factors,” and other documents Origin Materials has filed, or will file, with the SEC. If any of these risks materialize or our assumptions prove incorrect, actual results could differ materially from the results implied by these forward-looking statements. There may be additional risks that Origin Materials presently does not know, or that Origin Materials currently believes are immaterial, that could also cause actual results to differ from those contained in the forward-looking statements. In addition, forward-looking statements reflect Origin Materials’ expectations, plans, or forecasts of future events and views as of the date of this press release. Origin Materials anticipates that subsequent events and developments will cause its assessments to change. However, while Origin Materials may elect to update these forward-looking statements at some point in the future, Origin Materials specifically disclaim any obligation to do so. These forward-looking statements should not be relied upon as representing Origin Materials’ assessments of any date subsequent to the date of this press release. Accordingly, undue reliance should not be placed upon the forward-looking statements.

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