

Braskem signs partnership with Haldor Topsoe to develop biobased MEG

The companies invest in the construction of a demonstration plant in Denmark

Braskem, the Americas' leading producer of thermoplastic resins, and Danish-based Haldor Topsoe, a world leader in catalysts and surface science, have signed a technological cooperation agreement to develop a pioneering route to produce monoethylene glycol (MEG) from sugar. The agreement calls for the construction of a demonstration plant in Denmark, with operation slated to begin in 2019.

MEG is a key component of PET resin, the main man-made raw material used by the textile and packaging industries that is also widely used to make bottles. The project is based on a two-step process developed at Topsoe's labs along with own catalysts, and focuses on the conversion of sugar into MEG at a single industrial unit, which will reduce initial investment in the production and boost the competitiveness of the process.

"This novel bio-based initiative allies a cutting-edge technology with deep expertise in process design, scale-up and industrial operation, which will allow us to push the renewable chemistry to a whole new level. After the Green Polyethylene, this is another major step forward in our vision of using renewable polymers as a carbon capture tool and keep contributing to a more sustainable future." said Mateus Lopes, head of Innovation in Renewable Chemicals at Braskem.

With the agreement, Braskem wants to expand its portfolio of renewable products to offer new solutions that complement its bio-based polyethylene marketed with the I'm green™ seal. "With this new partnership, we strengthen our position as protagonists in the development of innovative solutions that will leverage the competitiveness of different biomasses and complement the traditional solutions offered by the petrochemical industry," said Gustavo Sergi, director of Renewable Chemicals at Braskem.

"Catalysis will play an extremely important role in the development of sustainable solutions that produce important chemicals from renewable sources such as sugars. We are proud to deliver the ground-breaking technology for the project with Braskem, and we look forward to

applying our world-leading competencies within catalysis and process engineering in the further commercialization of this important technology,” said Kim Knudsen, Executive Vice President at Haldor Topsoe.

The demonstration plant will conduct tests to validate the technology and confirm its technical and economic feasibility, which is a critical step before launching production on an industrial scale and commercial operations. The unit will be flexible to validate the technology in different raw materials such as sucrose, dextrose and second-generation sugars.

About Braskem

With a global, human-oriented vision of the future, Braskem’s 8,000 members strive to improve people’s lives by creating sustainable solutions in chemistry and plastics. It is the largest resin producer in the Americas, with an annual output of 20 million metric tons, including basic chemicals and petrochemicals, and R\$55 billion in revenue in 2016. It exports to Customers in approximately 100 countries and operates 41 industrial units, located in Brazil, the United States, Germany, and Mexico – the latter in partnership with Mexico-based company Idesa.

About I’m green™

I’m green™ polyethylene is a bio-based thermoplastic resin derived from sugarcane. Its greatest advantage is helping to reduce greenhouse gases in the air by capturing CO₂ during its production cycle.

About Haldor Topsoe

Haldor Topsoe is a world leader in catalysis and surface science, committed to helping our customers achieve optimal performance. We enable our customers to get the most out of their processes and products, using the least possible energy and resources, in the most responsible way. We are headquartered in Denmark and have project development, R&D, engineering, production plants, and sales & service across the globe. In 2016, our revenue was approximately 860 million U.S. dollars, and we employ some 2,600 employees.
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