

CARBIOS and Zhink Group intent to build PET biorecycling industrial capacities in China

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CARBIOS, a pioneer in the development and industrialization of biological technologies to reinvent the life cycle of plastic and textiles, and China's Zhink Group, specializing in two global industries, PET and textiles, have signed a joint Letter of Intent to build a biorecycling plant in China using CARBIOS's revolutionary enzymatic depolymerization technology to serve the global market.

The agreement officializes collaboration towards a long-term partnership in view of a first licensing contract to build a plant with a minimum annual processing capacity of 50k tons of prepared PET waste and would contribute to accelerating a circular economy for plastic and textiles. China, as the leading producer of PET in the world, is a key market for CARBIOS, and this agreement would establish a presence in this dominant market.

China: the world's largest PET producer

With 67 million tons of PET produced annually, representing 61% of global production, China is the world's largest PET producer. With regional and global demand for recycled PET growing, China also has the potential to take the lead in recycled PET (r-PET) production. In 2021, 58% of the world's r-PET was consumed in Asia (with 38% in China) underscoring this

region's importance both as a major producer and consumer.

Furthermore, China is a key transformer of PET into resins and fibers used in numerous applications in the packaging and textile industries. Most notably, China is the primary country for transforming PET into fiber, representing 78% of all PET fiber transformation in the world. Sustainability and the "dual carbon" policies are considered as main drivers for the Chinese PET recycling industry.

Strategic partnership for Zhink and CARBIOS

For Zhink, the strategic focus is on the development of two global industries, PET and textiles, and to be a leader with sustainable competitiveness. Zhink is a major actor within the PET market with an annual production of 3 million tons of PET, serving domestic and global markets. CARBIOS has developed a revolutionary enzymatic depolymerization technology that enables efficient and solvent-free recycling of PET plastic and textile waste into virgin-like products.

The initial agreement between the two groups would allow Zhink to increase its recycled PET capacities and meet its sustainable competitiveness objectives by offering r-PET from enzymatic recycling: a circular recycling solution that can process all types of PET waste including hard-to-recycle waste (such as opaque and colored bottles, multilayer food trays and textile waste) while reducing CO₂ emissions by 57%⁵ compared with virgin PET production. For CARBIOS, this agreement marks a significant step in the deployment of its technology worldwide and roll-out of its licensing model to achieve its ambition to become a leading technology provider in the recycling of PET by 2035. This Asia-based plant under license by Zhink would come in addition to the world's first industrial-scale enzymatic PET recycling plant which is currently under construction in Longlaville, France.

A milestone for CARBIOS's China market entry

The opening of official discussions with Zhink for a licensing agreement marks an important milestone in CARBIOS's market entry into China. Since its inception, CARBIOS has proactively protected its innovations in all key regions of interest. With China considered as a major market, all of CARBIOS's families of patents⁶ own one or more titles in this country. For its PET biorecycling technology, CARBIOS currently has 28 titles in force in China covering both the industrial process and the enzymes used (including variants that will be used in the industrial process).

Emmanuel Ladent, CEO, CARBIOS: "There is great momentum in China to accelerate the circular economy and meet its target of carbon neutrality by 2060. The technology developed by CARBIOS makes perfect sense in this context: capable of recycling all types of PET waste, it promotes a circular economy with high-quality products and significantly reduces the carbon footprint of industries. As a leader in PET production, Zhink is considered as a key partner for introducing our technology into China and will stimulate our international deployment."