Press release

Solvay announces groundbreaking solution for recycling PVDC

Scientists at Solvay have developed an innovative process that could revolutionize the future recycling of PVDC food packaging

Brussels, September 28, 2021 – Solvay, a science company delivering high performance materials for safe and reliable food packaging, has conducted a proof of concept showing that polyvinylidene chloride (PVDC) has the potential to be recycled. PVDC is used in food, beverage and healthcare multilayer barrier packaging across the world.

The proof of concept involves a process to recycle Ixan® PVDC bioriented film from a post-industrial waste source from food packaging without compromising the performance of the high barrier polymer. It marks an important step towards more sustainable and circular packaging applications, with the potential to launch other initiatives like recycling post-consumer packaging containing PVDC.

"The proof of concept developed by our research team is a solution for PVDC packaging circularity. It shows there is a possibility to reintegrate the recycled polymer into future applications, meaning it can be re-used and re-blended with virgin materials – without losing or degrading its high barrier properties," said Claire Guerrero, Global Marketing Manager for Packaging Segment and Sustainability at Solvay.

"The recycling technology developed by our team enables us to achieve the right quality so that the recycled PVDC meets the strict requirements for indirect food contact, creating the closed loop," adds Yves Vanderveken, Senior Project Portfolio Leader R&I.

Maintaining the high quality of the polymer was essential to Solvay in their quest to find a sustainable solution. Solvay specialty polymer's function of providing a strong barrier against water, oxygen and aromas is why it is used in essential applications to preserve food and reduce waste. A reduction of these properties would defeat its purpose.

Now that this initial breakthrough has been achieved, Solvay is urging fellow companies operating within the plastics industry to work together to turn the recycling of PVDC into reality. There is a particular need to introduce the infrastructure required to collect and segregate packaging containing PVDC.

"It goes without saying that setting a global PVDC recycling stream is a huge task, so we are therefore inviting our fellow companies to work alongside us to introduce a way to recycle PVDC across the globe. We all have a role to play in the plastic packaging recycling challenge, and Solvay is committed to playing its part," adds Claire Guerrero.

The results of this proof of concept are opening new possibilities to test the recyclability concept on other packaging applications using PVDC.

Progress beyond

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About Solvay

Solvay is a science company whose technologies bring benefits to many aspects of daily life. With more than 23,000 employees in 64 countries, Solvay bonds people, ideas and elements to reinvent progress. The Group seeks to create sustainable shared value for all, notably through its Solvay One Planet roadmap crafted around three pillars: protecting the climate, preserving resources and fostering a better life. The Group's innovative solutions contribute to safer, cleaner, and more sustainable products found in homes, food and consumer goods, planes, cars, batteries, smart devices, health care applications, water and air purification systems. Founded in 1863, Solvay today ranks among the world's top three companies for the vast majority of its activities and delivered net sales of €9 billion in 2020. Solvay is listed on Euronext Brussels and Paris (SOLB). Learn more at www.solvay.com.

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