Styrenics Circular Solutions

Press Release
6 March 2019

Collaboration of Agilyx and Styrenics Circular Solutions achieves promising results in polystyrene recycling

- **Styrenics Circular Solutions has concluded an evaluation study with Agilyx to move towards achieving full circularity for styrenics**
- **Depolymerisation of polystyrene waste delivers promising results**

Styrenics Circular Solutions (SCS), the joint industry initiative to accelerate circularity for styrenic polymers and Agilyx, a leading developer of chemical recycling technologies for plastics, have achieved promising results from the depolymerisation of various post-consumer polystyrene waste samples.

In a project aimed at supporting SCS in unlocking the intrinsic circularity potential of polystyrene, SCS has provided Agilyx with mixed plastic waste samples, mainly from food packaging, such as yogurt pots. The samples were collected and sorted in several European countries, such as Germany, France and Belgium. Agilyx evaluated the composition of the waste feedstock and subsequently recycled it back into their original monomer, using its proprietary depolymerisation technology.

“I am really encouraged by the results achieved thus far,” said Dr. Norbert Niessner, SCS Chair of Technologies. “The average styrene concentration is typical of our experience with samples of high impact polystyrene (HIPS). Now, we are working on further optimising process conditions for maximum yield.” SCS aims at further improving the styrene monomer yield from the depolymerisation process while reducing co-products. “We want to find the optimal purity level of post-consumer plastic waste, before we move on to replicate the results at a commercial unit,” he explained.

“The potential for polystyrene closed loop recycling is enormous,” said Joe Vaillancourt, Agilyx's Chief Executive Officer. “Using our technology platform we have demonstrated once again the high recyclability of polystyrene even with plastic waste samples of different compositions and sourced from different parts of Europe, which reflects the reality of waste feedstock in the market today. We are looking forward to further building on these findings together with Styrenics Circular Solutions.”

This depolymerisation testing comes after SCS’ recent incorporation in December 2018 and represents a cornerstone of its roadmap to propel the Circular Economy forward for styrenics. As part of its voluntary pledge in the context of the campaign launched by the European Commission, SCS has committed to dramatically accelerate the

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commercial use of game-changing technologies that make polystyrene products fully recyclable. Its portfolio of innovative recycling technologies includes dissolution and chemical recycling back to its monomer. New styrenic products can then be made from recycled styrene monomer without any degradation of quality or value so that they can be used again and again in high-quality applications, even for food contact.

About Styrenics Circular Solutions

The Styrenics Circular Solutions is a joint industry initiative to increase the circularity of styrenics. The initiative engages the entire value chain in the development and industrialisation of new recycling technologies and solutions. It aims to strengthen the sustainability of styrenic products while improving resource efficiency within the circular economy.

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