Styrenics Circular Solutions

Press Release
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Styrenics Circular Solutions shows with further challenge test success that polystyrene can be mechanically recycled for food contact

- **Second super-cleaning technology successfully tested for food contact mechanical recycling of polystyrene in collaboration with NGR and Fraunhofer IVV**
- **Multiple technologies delivering excellent results widen options for companies to invest in polystyrene recycling**

Styrenics Circular Solutions (SCS), the value chain initiative to increase the circularity of styrenic polymers, has again successfully demonstrated that polystyrene is excellently mechanically recyclable to food contact standards. SCS performed further so-called challenge tests with a second super-cleaning technology, which also proved to be highly efficient in removing impurities originating from waste streams. These results will drive the application for an opinion of the European Food Safety Authority (EFSA) on the use of recycled polystyrene (rPS) as food contact material.

With the aim to consistently achieve the very high purity levels of the polystyrene recyclate needed for food contact materials, the super-cleaning technology of NGR, an Austria-based leading plastic recycling machine manufacturer, was used during the mechanical recycling process. The challenge test revealed the outstanding cleaning efficiency of the technology used, leading to first-rate purity levels of the rPS. This result is supported by the intrinsic properties of polystyrene as a low diffusion polymer, which prevent any waste impurities from entering into or migrating through the polymer matrix. These challenge tests follow on the first success with the super-cleaning technology of Gneuss[1].

Frank Eisentraeger, Product Director PS EMEA, INEOS Styrolution and member of SCS working group Waste Feedstock says: “This second challenge test completely supports the findings of the first test. The NGR trials confirm that polystyrene is the best recyclable polymer for dairy food contact applications and meat and fish trays. These excellent results show once again that mechanical recycling of polystyrene delivers the required high purity levels needed by converters, brand-owners and retailers for direct food contact. Furthermore, they deliver a truly circular polymer that provides the utmost

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flexibility to go back into the original food contact applications and that does not degrade, neither in mechanical recycling nor in Form Fill and Seal."

Jens Kathmann, Secretary General SCS, comments, "The whole value chain will welcome the news that we have widened the range of cleaning technologies successfully delivering food grade mechanically recycled polystyrene. We now have an industrial blueprint of a flexible mechanical recycling plant with different technology options for investors and are excited to file two separate applications for EU authorisation of rPS as food contact material. We are looking forward to an acceleration of industrial initiatives, especially with the knowledge that mechanically recycled polystyrene has an outstanding environmental footprint, as confirmed by our initial LCA results, while maintaining polystyrene's much valued application and processing benefits[2]."

1 See also: 20201014_SCS_demonstrates-food-contact-suitability-of-PS-mechanical-recycling-.pdf (styrenics-circular-solutions.com)
2 View also: Coexpan and Intraplás confirm recycled polystyrene as a drop-in solution for virgin polystyrene in their existing facilities – Videos Styrenics Circular Solutions

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About Styrenics Circular Solutions

Styrenics Circular Solutions is the value chain 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.

For more information visit www.styrenics-circular-solutions.com

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