

Press Release

Official Launch of the POLYSTYRENELOOP project: Circular economy in action

On 7 November, the PolyStyreneLoop (PSL) Cooperative inaugurated the European EPS/XPS industry's closed-loop solution for the recycling of polystyrene (PS) insulation foam waste in Amsterdam. This innovative project employs a ground-breaking technology (Creasolv® Process) to dissolve PS foam waste containing the recently restricted flame retardant HBCD. The HBCD is removed, followed by recovery of bromine, which can then be used again for the production of new flame retardants.

As an industrial pioneer in the push for a circular economy, the PSL project will help the EU deal with an expected 20 million tonnes of insulation material containing HBCD that will need to be disposed of in the next 50 years.

Mr Paolo Sandri, speaking on behalf of the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs of the European Commission, explained that these legacy chemicals are “one of the challenges on our way to circularity”. He praised the PSL project by stating it is a “significant breakthrough” adding that “the project is an essential contribution to the EU’s efforts to develop a sustainable, low carbon, resource efficient and competitive economy. It ticks all the boxes of the circular economy.”

Mr Cees Luttkhuizen, representing the Dutch Ministry of Infrastructure and the Environment, praised the cooperation between the industry and the Dutch authorities. He welcomed the initiative of such a project that links the entire value chain together. In this unique endeavour, industry partners covering the upstream to the downstream are proactively working to solve the future waste stream issue and providing a solution for the next 50 years.

Representing Plastics Europe, Mr Christian Block was proud of the new initiative by the Polystyrene value chain that brings together 56 members and supporters of the PolyStyreneLoop Cooperative, and also believes it will lead to a sustainable solution for the integrated waste management of polystyrene.

Recycling PS foam by the PSL process typically saves as much as 50% CO₂ emissions (compared to using it for energy recovery). There is no doubt that this technology offers an additional contribution to resource efficiency at the end-of-life phase for PS foam insulation, on top of the CO₂ emissions already saved by reducing energy consumption during the long-use phase in the form of building insulation.

The Polystyrene Loop process is just one example of the EPS/XPS industry rising to the waste challenges it faces voluntarily. In fact, the technology on which PS Loop is based was accepted by the UN Basel convention as a best available technology for the pretreatment of waste containing POPs. “It encourages industry-led and market-based initiatives to be carried out with all partners along the value chain. It is a signal to other polymer producers that the cooperation can lead to more circularity and sustainability,” Sandri noted.

In addition to being financially supported by the EU, the PS supply chain (made up mostly of SMEs) has pulled together to raise the necessary equity to build the first demonstration plant in the Netherlands.

The PolyStyreneLoop demonstration plant aims to begin operations in 2018 and will have the capacity to treat up to 3300 tonnes of PS waste per year. Once up and running, the PolyStyreneLoop project will be able to cope with incoming PS foam waste streams and produce high quality recyclate that could be used in new PS foam insulation.

In terms of the project's impact at the EU level, Sandri concluded, "it is an inspiring best practice to feed the forthcoming Plastics Strategy."

For more information, please contact

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