



Progress beyond

## Solvay partners with French start-up Ostium in single-use surgical instruments material recycling

Value chain collaboration aims to foster a circular ecosystem and reduce the carbon footprint of single-use surgical instruments molded in Ixef® PARA.

Brussels, November 8, 2022

Solvay, a leading supplier of advanced materials, has teamed up with French start-up [Ostium](#) in a joint project designed to enable the mechanical recycling of end-of-life single-use surgical instruments molded in glass-fiber reinforced [Ixef® polyarylamide \(PARA\)](#) from Solvay's portfolio of specialty polymers.

The initiative is the first for valuable polymers to be recycled and upcycled from used healthcare devices, proving that the medical safety provided by high-performance polymers such as Solvay's Ixef® PARA in single-use surgical instruments, can be reconciled with the need for greater sustainability and resource efficiency.

"Our customers in the healthcare industry must meet strict regulatory demands, while at the same time striving to minimize the carbon footprint of their products and support the reduction of hospitals and clinics' end-of-life waste," says Claire Guerrero, Global Marketing Manager Sustainability at Solvay. "We identified a gap between these challenges, which prompted us to forge this unique collaboration for developing a breakthrough recycling process for used surgical instruments that are commonly disposed of by incineration rather than reclaiming their high material value. By controlling every step in the loop from the original Ixef® PARA to the upcycled PARA compound, we will be able to ensure its high quality, purity, and performance for demanding downstream applications and can make a significant contribution to a more sustainable polymer economy."

Ostium Group, a French start-up specializing in the design and manufacture of instruments for hip, knee, shoulder, and trauma orthopedic surgery, will supply hospitals with new custom surgical kits made with Ixef® PARA and collect the contaminated instruments after use. This will also promote the replacement of metal surgical instruments with lightweight polymer designs and help medical facilities reduce their time and cost for sterilization, and disposal as well as lower their carbon footprint.

The partnership with a regionally recognized leader in the treatment and recycling of waste from healthcare activities with infectious risks, was key to developing a dedicated mechanical process to clean, sort, and grind the collected material, delivering high-quality polymer feedstock that can be

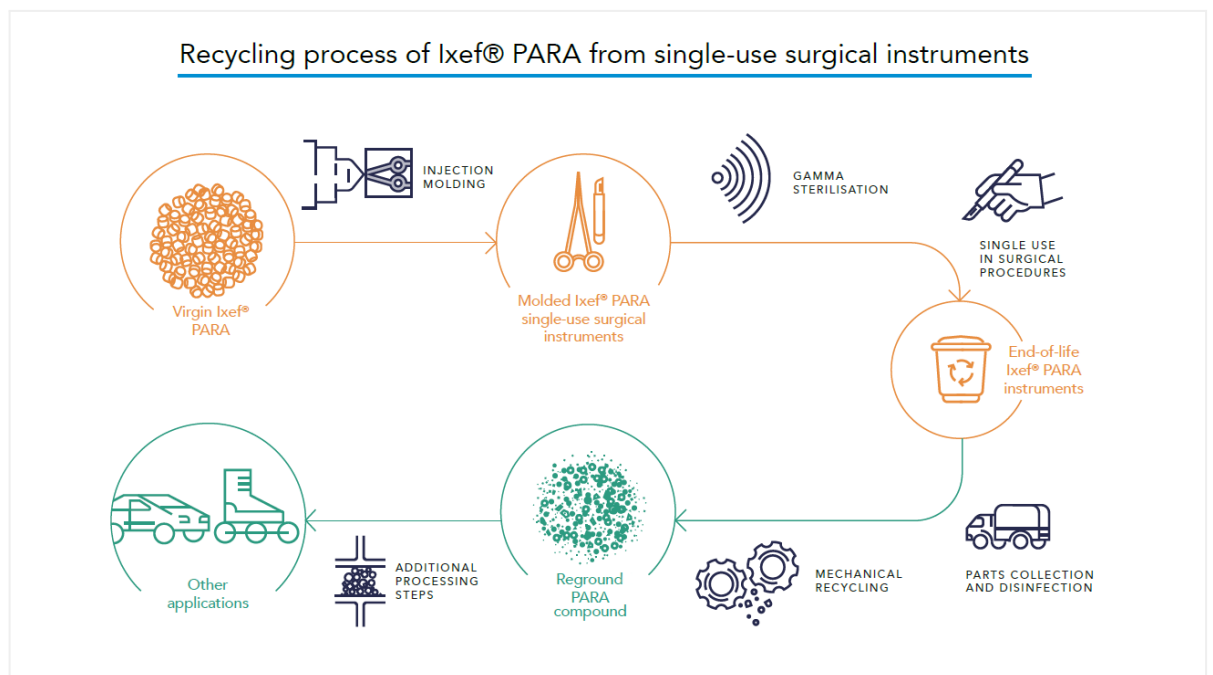


used in the production of new polymers. In this way, end-of-life surgical instruments can become part of a circular ecosystem that prevents the loss of valuable material and reduces the consumption of fossil resources.

Finally, Solvay is evaluating upcycling options and how to integrate back this recycled feedstock into new high-performance PARA compounds. Initial trials have shown that the recycle-based PARA compound provides a very high level of performance, with up to 85% of flexural properties and no loss in excellent surface appearance when compared with the virgin grade, with the additional advantage of a lower carbon footprint.

In view of regulations in place in the healthcare market with constraints on the use of recycled materials, Solvay is targeting open-loop downstream solutions in which the recycled material will find a second life in high-end markets such as automotive and sports and leisure equipment.

You can find out more about this partnership by visiting Solvay at the [COMPAMED 2022](#) in Düsseldorf, from November 14-17 in Hall 8A, Booth L12.





## About Solvay

Solvay is a science company whose technologies bring benefits to many aspects of daily life. With more than 21,000 employees in 63 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 plan crafted around three pillars: protecting the climate, preserving resources and fostering 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 €10.1 billion in 2021. Solvay is listed on Euronext Brussels (SOLB) and Paris. Learn more at [www.solvay.com](http://www.solvay.com).

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