

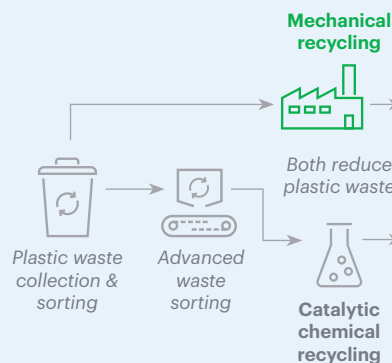
Solvent-based – Newcycling

To address flexible plastic waste (LDPE)

What is it?	A process that dissolves flexible plastics – enabling a higher level of material purity
Applications	Recycled plastics for flexible packaging in personal care applications

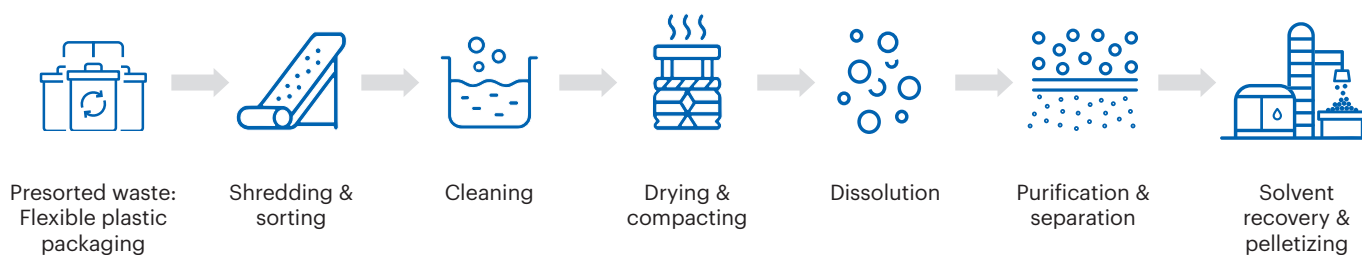
Today’s flexible detergent pouch could be tomorrow’s refillable soap solution

Innovation in process: This process recycles flexible plastic waste – the kind we encounter daily in packaging for hygiene products. What makes it special is the use of a solvent that enables the removal of significantly more impurities and color pigments. The resulting recycled plastic can be used for high-quality flexible packaging, such as those used for personal care and hygiene products.



How it works

Mixed post-consumer waste containing flexible packaging items such as detergent pouches and overwrap for personal care products will be delivered to the plant. This material mix will go through pre-treatment before entering our solvent-based recycling. Here, the plastic will be dissolved in a special solvent, which enables the removal of impurities and insoluble components, such as color pigments. The material will then be dried and processed into a recycled polymer product, while the solvent will be recovered and reused.



Benefits

- Addressing the challenge of recycling flexible packaging into polymers suitable for high-quality applications.
- Process saves resources by recovering and reusing solvent.

Facts

- The recycled material will be sold under the LYB *Circulen* portfolio.
- LYB is leveraging its expertise in polyolefin and recyclate processing and product development to drive the advancement of our *Newcycling* solvent-based technology.

Quotes/ Outlook



Yvonne van der Laan
Executive Vice President, Circular
and Low Carbon Solutions

“Our solvent-based technology will complement our mechanical and chemical recycling capabilities by enabling the transformation of flexible consumer waste into high-quality applications. With this technology, we will offer three distinct pathways to transform waste into valuable resources.”



Gerben Meier
Vice President, Global Product
Development and Circular Design

“Research and development are key to improving our recycling technologies. The solvent-based *Newcycling* technology shows great opportunities and we are actively leveraging its potential by driving its further development.”

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