

Dissolution Recycling for challenging applications: food contact, BOPP and automotive.

ReVentas has developed a dissolution recycling technology capable of meeting the highest quality demands of the plastics industry. By removing contaminants, additives, pigments, odours and other unwanted substances from polyethylene (PE) and polypropylene (PP) waste streams, ReVentas returns the polymer to a virgin-like state suitable for new packaging, contact-sensitive and specialist applications that cannot currently be served by conventional mechanical recycling. The process enables the recovery of high-quality material from post-consumer and difficult-to-recycle waste streams while preserving the polymer properties required for demanding end uses.

As brand owners and manufacturers face increasing pressure to incorporate recycled content into high-performance products, significant technical barriers remain for applications such as food-contact packaging, biaxially oriented polypropylene (BOPP) films and automotive components. These sectors require exceptional purity, consistent performance and robust regulatory compliance, all of which are challenging to achieve using existing recycling routes.

This presentation will demonstrate how dissolution recycling can bridge this gap by transforming complex PE and PP waste streams into high-value recycled resins suitable for demanding applications. It will discuss recent converter trials, including successful production of transparent BOPP film from recycled polypropylene PCR.

The presentation will also explore the application of dissolution recycling to deliver food-contact compliant polymers through the effective removal of contaminants and non-intentionally added substances (NIAS), as well as its role in supporting automotive manufacturers seeking high-quality recycled materials without compromising performance, aesthetics or durability. Through real-world examples and scale-up developments, attendees will gain insight into how dissolution recycling is emerging as a practical pathway for closing the loop on polyolefins and unlocking circularity in some of the most challenging and valuable plastic applications.