



## » PRODUCT BULLETIN

# Cesa™ Unify™ A4R

## Polyolefin Compatibilizer for Enhanced Recycling

### RECYCLED MATERIAL IN A CHANGING MARKET

Legislation globally is driving change towards increased quantities of post-consumer recycled (PCR) materials, further encouraged by the implementation of usage targets and new tariffs. Many brand owners are also setting their own sustainability targets by pledging to increase PCR content by a significant percentage within relatively short time scales. Both legislation and industry goals have created an increased demand for recycled material across the plastics industry, but especially within the packaging market.

### RECYCLING CHALLENGES

As more and more PCR enters the value chain, brand owners, recyclers, and converters are faced with new and increasing challenges related to recycling. Flexible and rigid packaging based on polyolefins is widely used for food applications due to convenience, ease of handling, and adequate food protection properties. For this reason packaging often contains layers of both PP and PE based on

its functionality. Since these layers are difficult to separate, and the polymers are not compatible, their properties can be negatively influenced during the recycling phase.

### DESIGNED FOR COMPATIBILITY

Cesa™ Unify™ A4R is part of the Additives for Recycling portfolio of solutions that helps improve the recycling of polyolefins. It works by bringing incompatible polymers – such as PP and PE – together by forming them into a homogenous polymer mixture that increases mechanical properties based on polymer modification. The technology also helps maintain stiffness and mechanical strength close to that of the polymer's starting point, thereby improving impact strength and ductility.

This polyolefin compatibilizer additive can help brand owners, recyclers, and converters who require high-performance and cost-effective solutions that can make recycling easier, allowing them to continue using greater quantities of PCR in their polyolefin applications.

Sustainability Spotlight



Recycle  
Solutions



## KEY CHARACTERISTICS

- Designed for polyolefin recycling and to enhance circularity
- Helps bring incompatible polymers together by forming them into a homogenous polymer mixture
- Improves the mechanical performance of mixed PP/PE streams
- Increases impact strength by up to 50%
- Increases ductility by up to 100% for improved performance
- Maintains mechanical strength properties close to polymer starting point
- The end result is that the characteristics of rPP remain with higher impact properties
- Good cost-performance ratio
- Can be combined with color into a single masterbatch product for convenience
- Product guidance and technical assistance is available from our experts

## MARKETS & APPLICATIONS

- Recycled polyolefins
- Packaging, consumer & others
- High-value polyolefin applications with recycled material content
- Virgin polymers which will be recycled after the use phase

Currently unavailable in North America—please contact your Avient representative for further information.



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