

Additives for Recycling

Increase recycled content – maintain performance & processability

Recycling is a hot topic in the polymer industry. Brands and customers are asking for recycled plastics in packaging and other applications, and regulations are requiring them as well.

Adding under-stabilized post-consumer or post-industrial recycled (PCR/PIR) content to formulations can affect material quality, processing throughput and consistency, and end use performance and durability.

Stabilization additives play a key role in optimizing recycled materials.

How Recyclers Benefit:

- Protect against degradation during processing
- Produce higher-quality recyclate
- Encourage greater use of recycled material
- Increase percentage of PCR in polyolefin packaging compared to non-stabilized material

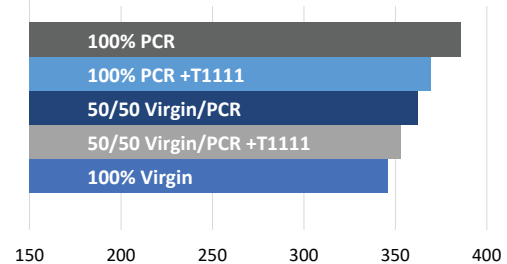


How Converters Benefit:

- Improve material performance, consistency and aesthetics
- Accelerate throughput and reduce scrap
- Permit lightweight, thin-wall designs
- Expand use to new or higher-end applications

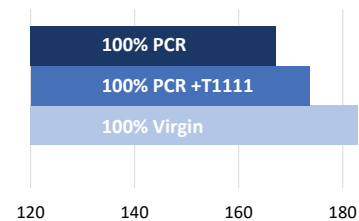
Drop In Comparison

Bottle Weight (grams)



Optimized Processing Conditions

Crush Force (Max Lbf)



About BAEROPOL T-Blends

This family of blended synergistic stabilizers are pre-formulated to provide economical, high-performance stabilization for recycled polyolefins. T-Blends are neat additives supplied as pre-blends for ease of use. They are added directly during melt filtration.

Product Features & Benefits:

- Low-dusting forms for safe and easy handling, dosing and dry blending
- Can be combined with other additives in convenient, customized one-packs
- Fewer defects (large gels, pinholes) and less bubble breakage
- Cost-effective vs. masterbatches



+

Melt Strength

+

Gel Prevention

+

Long Term Heat Stability

+

Color Retention (natural grades)



Pin-holes are a major contributor to high scrap rates and, if left unresolved, can result in customer claims.



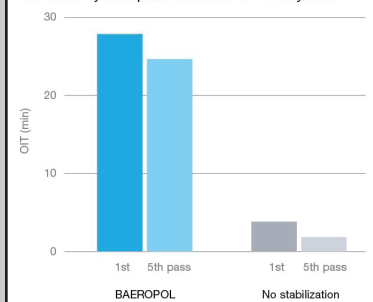
Frequent bubble collapse is a constant hassle when working with PCR. This can be significantly reduced with BAEROPOL T-Blend.

Restabilization Improves OIT

Oxidation Induction Time (OIT) measures how much active stabilizer remains in a polymer. Often, the base stabilizer added to a virgin resin is depleted during the first use. The recycling process can further reduce or eliminate residual stabilization through heat, shear forces and stress. BAEROPOL T-Blends replace lost stabilization additives in PCR/PIR, helping to optimize the recycling process, the material and the final application. Integrating T-Blend at the production stage enhances the OIT and acid neutralization capabilities of virgin resin, setting the stage for its subsequent inclusion in PCR content during the conversion process.

Enhancing Oxidation Induction Time by Restabilization

OIT value by multipass extrusion of PP recyclate



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