

BOOSTER PO

A COST-SAVING ALLOYING AGENT FOR POLYOLEFINIC BLENDS

Products to be blended :

- PP	- LDPE
- HDPE	- LLDPE
- MDPE	- PA

Functionality : What does it do ?

During the compounding/plasticizing process, the addition of 2-5% (weight) Booster PO reduces the size of the individual “minority components” in the blend, enabling a better dispersion of those components in the dominant matrix. By reducing the size of the minority components, its intrinsic surface is increased, resulting in a larger contact surface with better bonding behaviour.

Result: A more consistent, well-dispersed blend.

Physical characteristics:

1. Improved impact strength
2. Increased tensile strength
3. Better elongation properties
4. A linear, proportional relationship in E-modulus of the blended polyolefins
5. Improved dispersion of additives (color masterbatch, stabilizers, flame retardants etc.) resulting in significant reduction in quantities required to obtain the desired results
6. A virtually stress-free end product

Processing characteristics:

1. In extrusion/compounding: a better dispersed polymer blend results in a reduction in electricity consumption (amperage meter down) enabling an output improvement up to 30%
2. In thermoforming: a film/sheet of a Booster PO blend tends to be more flexible and stress-free, allowing for an increased speed in the thermoforming process (up to 15%)
3. In processes involving a stretching step (e.g. film blowing, tape production, fiber spinning) improved stretch ratios can be obtained, leading improved strength of PE-film, tenacity of raffia/monofilament at the same material cost

Examples of cost savings:

1. Blending 2 different (virgin or recycled) polymers into a high-quality end product
2. Cutting compounding cost by up to 30%
3. Improving strength of blown and cast PE-film
4. Improving tenacity of tape and monofilament

Specific properties

	Value	Units	
Physical			
Density	930	kg/m ³	ISO 1183
Bulk Density	560	kg/m ³	ISO R60
Melt flow index			
190°C, 10 kg	2,0	g/min	ISO 1133
Thermal			
Melting point	130	°C	
Granular size			
Average granule diameter	3-4	mm	ASTM E11
Granules < 1mm	<1	%	ASTM E11
Granules > 5,6 mm	nil	%	ASTM E11
Storage			
• Dry place, away from direct sunlight, below 35°C			
Typical quantity needed 2-5 % of weight of final mixture			

Examples of applications :

- Blending of (slightly contaminated) recycle PE for tubes/pipes
- Output improvement of PE-film production
- Cost-effective tenacity-improvement of PE raffia and monofilament



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