

## Masterbatches for BOPE / MOPE Films

A portfolio overview of our masterbatch solutions in North America



## We Make Masterbatch solutions for Oriented films

Today LyondellBasell is making the future of packaging a reality. LyondellBasell provides a full line of masterbatch solutions that can be customized to meet your Biaxially-Oriented Polyethylene (BOPE) and Mono-Axially Oriented Polyethylene (MOPE) film structure needs. Our oriented product offerings include slip, antiblock, antistatic and antifog to address the most challenging packaging designs.

LyondellBasell has long been a leader in the BOPP masterbatch market and can help translate the demanding requirements of oriented polypropylene (PP) applications to polyethylene (PE). BOPE/MOPE film construction can help facilitate a mono-material structure, which can aid in the increase of recyclability for PE and multilayer packaging.

Our technology centers across the globe allow new products and applications to be developed in close collaboration with suppliers and customers, with a clear commitment to the oriented market and support of a circular economy.



## **Explore our broad range of Masterbatches**

Additive Type	Product Name	Additive Description
Antiblock	Polybatch AB	The addition of antiblock into thin films prevents their tendency to stick together (block).  A variety of <i>Polybatch</i> AB products are available depending on required film properties (antiblock performance, optical properties, surface roughness, and scratch resistance).
Antioxidant	Polybatch AO	Antioxidants can protect polymers during processing as well as throughout the package lifetime. Antioxidants also enable the use of recycled content in packaging by managing gel formation from polymer degradation.
Slip	Polybatch CE	The reduction of film to metal and film to film coefficient of friction (COF) enables higher processing and handling speeds. <i>Polybatch</i> CE masterbatches provide a variety of short-term and long-term COF reduction for packaging film.
White	<i>Polybatch</i> White	Lyondellbasell offers a wide range of white masterbatch with up to 80% titanium dioxide.  These masterbatches are appropriate for labels, lamination films, protective films, solid white films for printing, and many other applications.

Additive Type	Product Name	Additive Description
Antifog	Polybatch AF	Antifog concentrates additives migrate to the film's surface and spread out condensated water coming from the packaged goods to prevent droplet formation, keeping the package clear and its contents visible to the consumer.
Antistat	Polybatch VLA	Static build up can limit the processing speed of film lines, and can lead to dust pickup on the film. Internal antistatic additives are available to dissipate the static charges and prevent build up.
Matte	Polybatch DUL	Matte compounds are used to provide a more natural, luxury appearance to PE packaging. They are available in a variety of seal initiation temperatures based on application need.
Nucleator	Polybatch CLR	Semi-crystalline polymers crystallize from the melt upon cooling. Nucleating agents increase the rate and temperature of crystallization, which has processing advantages and improves the barrier, stiffness, and optical properties of the film.
Opaque / Pearlescent	Polybatch PF	Pearlescent films with non-pigmented white opacity can be produced with <i>Polybatch</i> PF cavitating masterbatches upon film orientation. This non-pigmented method of creating white films can increase a package's recyclability over pigmented film. <i>Polybatch</i> PF is also available as a combined cavitation and TiO2 masterbatch when needed.
Polymer Modifier	Polybatch CPS	Adding <i>Polybatch</i> CPS to oriented PE films can improve processability as well as physical properties such as haze, gloss, stiffness, and barrier properties. <i>Polybatch</i> CPS masterbatches do not have food contact approval in polyethylene and are not intended for food contact applications.
Process Aid	Polybatch AMF	The incorporation of process-aid masterbatches during processing reduces the friction between the molten polymer and the metal die wall, eliminating melt fracture and allowing for higher output from the decrease in die pressure. Die buildup is also reduced or eliminated with the use of process aids, allowing for less downtime to clean die lips.
Super Slip	Polybatch IL	Polybatch IL products contain non-migratory super slip additives that offer instant COF reduction and excellent hot slip properties. These super slips are also used for cold-seal release applications to prevent films from sticking to themselves during winding.

## **ABOUT US**

**LyondellBasell (NYSE: LYB)** is one of the largest plastics, chemicals and refining companies in the world. Driven by its employees around the globe, LyondellBasell produces materials and products that are key to advancing solutions to modern challenges like enhancing food safety through lightweight and flexible packaging, protecting the purity of water supplies through stronger and more versatile pipes, improving the safety, comfort and fuel efficiency of many of the cars and trucks on the road, and ensuring the safe and effective functionality in electronics and appliances. LyondellBasell sells products into more than 100 countries and is the world's largest producer of polymer compounds and the largest licensor of polyolefin technologies.

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