

Near-infrared detectable masterbatch product range

Optimizing waste separation



Design for circularity



Black and dark-colored plastics are difficult to sort in post-consumer waste because they are not visible to the optical or Near-Infrared (NIR) detectors which are widely used in material recycling facilities. When black and dark plastics cannot be sorted by color or polymer type, they can enter the waste stream destined for landfill or incineration or reduce the value and opportunities for re-use of the sorted plastic fractions.

LyondellBasell offers a NIR detectable masterbatch range that enable the sorting of black plastic articles in post-consumer waste streams. We can also support our customers to reformulate their colors with alternatives to carbon black.

Product benefits

- Available for a range of polymers
- Thick and thin wall applications
- Different color strengths
- Alternative pigment solutions
- Food contact compliances:
 - European and FDA *

Tests and certificates

- Tested by TOMRA and PELLEN sorting systems
- COTREP homologation certificate for Polybatch 73641 NIR Black

Some application areas:

- Polypropylene injection molded containers for food and cosmetics.
- Polystyrene and PET thermoformed food trays.
- Polyethylene blow molded bottles for personal care and household.

Product characteristics

Properties	Polymer carrier	Carbon black free?	Non-magnetic?	Non-warping?	EU Food Contact?	FDA Food Contact?	Addition rate	Features	Applications
Polybatch 73641 NIR	PE	✓	✓	✗	✓	✓	2 - 10%	Standard version	<ul style="list-style-type: none"> Thick wall molding Opaque articles
Polybatch 73644 NIR	PE	✓	✓	✗	✓	✓	1 - 10%	High strength version for use with PCR	<ul style="list-style-type: none"> Thick wall molding Opaque articles. Use with PCR
Polybatch PP 73641 NIR	PP	✓	✓	✗	✓	✓	2 - 10%	PP carrier version	<ul style="list-style-type: none"> Thick wall molding Opaque articles Use if PP carrier is needed
Polybatch 73626 NIR	PE	✓	✓	✓	✓	✓	2 - 10%	Neutral color	<ul style="list-style-type: none"> Thick & thin wall molding Opaque & semitransparent articles
Polybatch PET 73646 NIR	PET	✓	✓	—	✓	✓	2 - 5%	PET carrier version	<ul style="list-style-type: none"> Thick wall molding Opaque articles
Polybatch PET 73649 NIR	PET	✓	✓	—	✓	✗	2 - 5%	PET carrier version	<ul style="list-style-type: none"> Thick wall molding Opaque articles
Polybatch PS 73647 NIR	PS	✓	✓	—	✓	✓	2 - 5%	PS carrier version	<ul style="list-style-type: none"> Thick wall molding Opaque articles
Polybatch PS 73648 NIR	PS	✓	✓	—	✓	✗	2 - 5%	PS carrier version	<ul style="list-style-type: none"> Thick wall molding Opaque articles

* Food Contact. Please contact us for detailed information regarding use of our Polybatch NIR masterbatches in food contact applications.

About us

We are LyondellBasell (LYB) – a leader in the global chemical industry creating solutions for everyday sustainable living. Through advanced technology and focused investments, we are enabling a circular and low carbon economy. Across all we do, we aim to unlock value for our customers, investors and society. As one of the world's largest producers of polymers and a leader in polyolefin technologies, we develop, manufacture and market high-quality and innovative products for applications ranging from sustainable transportation and food safety to clean water and quality healthcare. For more information, please visit www.lyb.com or follow @LyondellBasell on LinkedIn.

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