

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 PELLENC 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?	Typical Dosage Rate	
Polyethylene						
<i>Polybatch 73641 NIR</i>	PE-LD	✓	✓	✗	2 - 10%	<ul style="list-style-type: none"> • Made to stock • Cotrep approval at 5% in PP • Suitable for opaque, thick wall articles
<i>Polybatch 73644 NIR</i>	PE-LD	✓	✓	✗	1 – 9%	<ul style="list-style-type: none"> • Highly concentrated version for use with PCR • Suitable for opaque, thick wall articles
<i>Polybatch 73626 NIR</i>	PE-LD	✓	✓	✓	2 - 10%	<ul style="list-style-type: none"> • Neutral color • Suitable for semi-transparent and opaque articles
Polypropylene						
<i>Polybatch PP 73641 NIR</i>	PP	✓	✓	✗	2 - 10%	<ul style="list-style-type: none"> • PP carrier version • Suitable for opaque, thick wall articles
Polystyrene						
<i>Polybatch PS 73647 NIR</i>	GPPS	✓	✓	–	2- 5%	<ul style="list-style-type: none"> • PS carrier version • Suitable for opaque, thick wall articles
Polyethylene terephthalate						
<i>Polybatch PET 73646 NIR</i>	PET	✓	✓	–	2 - 4%	<ul style="list-style-type: none"> • PET carrier version • Suitable for opaque, thick wall 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 – 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.lyondellbasell.com or follow @LyondellBasell on LinkedIn.

Before using a product sold by a company of the LyondellBasell family of companies ("LyondellBasell"), users should make their own independent determination that the product is suitable for the intended use and can be used safely and legally. LyondellBasell MAKES NO WARRANTY, EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) OTHER THAN AS AGREED TO BY LyondellBasell IN THE PRODUCT SALES CONTRACT. LyondellBasell prohibits or restricts the use of its products in certain applications. For further information on restrictions or prohibitions of use, please contact a LyondellBasell representative. Users should review the applicable Material Safety Data Sheet before handling the product. *Polybatch* is a trademark owned or used by the LyondellBasell family of companies and is registered in the U.S. Patent and Trademark Office.