

## 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	
<b>Polyethylene</b>						
<i>Polybatch</i> 73641 NIR	PE-LD	✓	✓	✗	2 - 10%	<ul style="list-style-type: none"> <li>• Made to stock</li> <li>• Cotrep approval at 5% in PP</li> <li>• Suitable for opaque, thick wall articles</li> </ul>
<i>Polybatch</i> 73644 NIR	PE-LD	✓	✓	✗	1 - 9%	<ul style="list-style-type: none"> <li>• Highly concentrated version for use with PCR</li> <li>• Suitable for opaque, thick wall articles</li> </ul>
<i>Polybatch</i> 73622 NIR	PE-LD	✓	✓	✓	2 - 10%	<ul style="list-style-type: none"> <li>• Neutral color</li> <li>• Suitable for semi-transparent and opaque articles</li> </ul>
<b>Polypropylene</b>						
<i>Polybatch</i> PP 73641 NIR	PP	✓	✓	✗	2 - 10%	<ul style="list-style-type: none"> <li>• PP carrier version</li> <li>• Suitable for opaque, thick wall articles</li> </ul>
<b>Polystyrene</b>						
<i>Polybatch</i> PS 73647 NIR	GPPS	✓	✓	–	2 - 5%	<ul style="list-style-type: none"> <li>• PS carrier version</li> <li>• Suitable for opaque, thick wall articles</li> </ul>
<b>Polyethylene terephthalate</b>						
<i>Polybatch</i> PET 73646 NIR	PET	✓	✓	–	2 - 4%	<ul style="list-style-type: none"> <li>• PET carrier version</li> <li>• Suitable for opaque, thick wall articles</li> </ul>

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

# 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. More information about LyondellBasell can be found at [www.LyondellBasell.com](http://www.LyondellBasell.com).

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