



# CirculenRecover

Plastics make modern society possible and often are a more sustainable material than alternatives. LyondellBasell recognizes the challenges of plastic waste and is launching products that help customers achieve circularity in their use of plastic packaging by increasing usage of recycled content and diverting more plastic from landfill or incineration. **We are committed to producing and marketing at least two million metric tons of recycled and renewable based polymers annually by 2030.** We are advancing technologies and innovations that will help eliminate plastic waste and maximize the value of plastics by keeping these resources in use for as long as possible.

**Polyethylene and Polypropylene products containing Post Consumer Resin (PCR) for the following applications:**

## Injection Molding

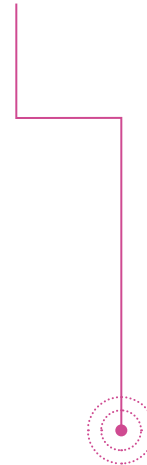
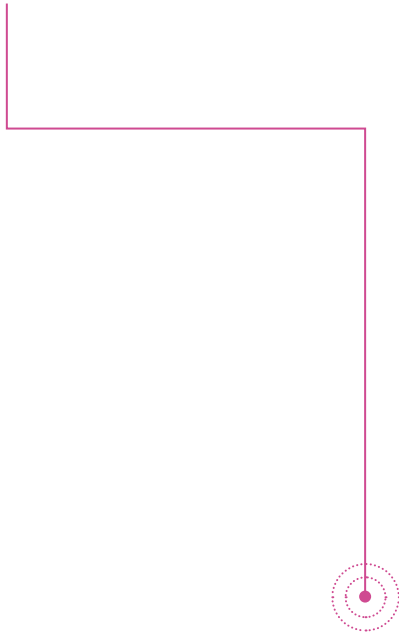
- Caps and closures
- Crates, pails, and food containers

## Blow Molding

- Liquid food bottles
- Bottles for consumer goods

## Flexibles

- General purpose film
- Dry food packaging



# *Circulen* Family of Sustainable Solutions

Through its *Circulen* polymer portfolio, LyondellBasell enables brand owners to address multiple packaging sustainability and circularity challenges. From mechanical and advanced recycling solutions that divert plastic from landfills to renewable-based solutions that offer greenhouse gas (GHG) emission benefits, the *Circulen* polymer portfolio offers the industry's broadest range of sustainable packaging solutions.



## *Circulen*Recover

Used in a wide variety of industrial, household and consumer product applications, *Circulen*Recover products are made from plastic waste through a mechanical recycling process. This type of recycling upgrades plastic waste into usable materials through mechanical processes including sorting, washing, grinding, melting and forming new pellets. The resulting polymers can also be blended or compounded with traditional fossil-based products, providing customers with high-quality polymers with an optimal balance of performance characteristics and recycled content.



## *Circulen*Revive

Products are made using an advanced recycling process to convert plastic waste back to its molecular level. The resulting pyrolysis oil is then used as a feedstock in our conventional production processes to produce new polymers. A broad range of plastics can be recycled using this process including hard-to-recycle items such as mixed materials, composites, multilayer and flexible plastics. The advanced recycled feedstock is mixed with conventional feedstocks in our process, and allocated to *Circulen*Revive products using a mass balance approach certified according to the International Sustainability and Carbon Certification (ISCC) PLUS standard. These polymers can be used in highly regulated applications such as food contact and healthcare.



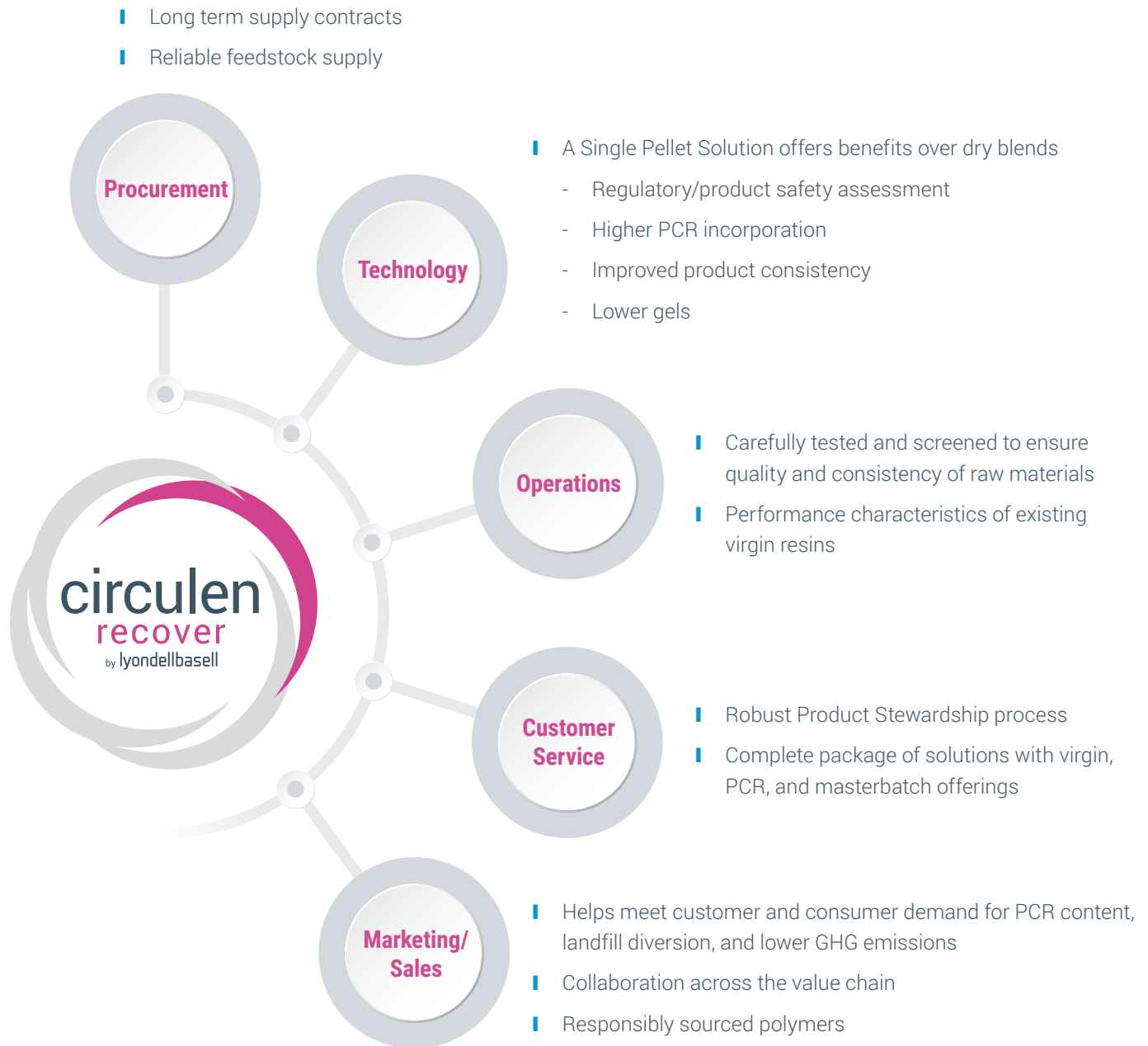
## *Circulen*Renew

Offering a lower carbon footprint than fossil-based polymers, *Circulen*Renew products are sourced from renewable feedstocks, namely bio-based wastes and residual oils, such as used cooking oils. These feedstocks are used in our conventional production processes along with conventional feedstocks, and are allocated to *Circulen*Renew products using an ISCC PLUS-certified mass balance approach. These polymers can also be used in highly regulated applications such as food contact and healthcare.

Learn more at [LyondellBasell.com/Circulen](https://www.lyondellbasell.com/Circulen)

# Unlock the value of *CirculenRecover*

LyondellBasell is investing across the value chain – from collection to offtake to production – to ensure the reliable supply of high-quality feedstock necessary to deliver meaningful circular and low carbon solutions to our customers. Our *CirculenRecover* grades are specifically designed to fulfill the unique needs of multiple stakeholders across your organization while also addressing the most pressing demands of your customers and consumers.



# North America *CirculenRecover* Product Grades

Product	Type	Process	Application * Food Contact	% PCR	PE MI (190 °C/2.16 kg) Or PP MFR (230 °C/2.16 kg)	PE Density (g/cc) or PP Flex Modulus (kpsi) / Notched Izod (ft-lb/in)
GA501R	LLDPE	Blown Film	Can Liner / Industrial Film	30	1.0	0.918
M6020SBR	HDPE	Blown Film	High Barrier Dry Food*	50	2.0	0.960
L5670R	HDPE	Blown Film	Food*	90	0.7	0.956
LM6007R	HDPE	Blow Molding	Liquid Food*	25	0.7	0.960
LR7320R	HDPE	Blow Molding	Small Part Bottle	75	35 (HLMI – 190 °C / 21.6 kg)	0.959
EP643RR	PP	Injection Molding	Caps and Closures*	25	23	210 / 1.1
EP643NR	PP	Injection Molding	Caps and Closures*	25	12	220 / 1.1
EP445PR	PP	Injection Molding	Tubs & Containers* Caps & Closures*	30	17	165 / No Break

\*Can be considered for food contact application use pending review of product stewardship for the targeted end use application

To learn more about *CirculenRecover* grades available in Europe, please access our [Product Selection Guide](#).

# 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](http://www.lyondellbasell.com) or follow [@LyondellBasell](https://www.linkedin.com/company/lyondellbasell) on LinkedIn.

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