

INTRO TO PCR

QUICK REFERENCE

Post-consumer recycled content, or PCR, refers to materials that have been used by consumers, collected, recycled, and then repurposed into new products, including packaging. The term PCR is mostly used when discussing plastics and may also be referred to as “post-consumer resin” or post-consumer waste (PCW).

Post-industrial recycled content, or PIR, basically involves the capturing and recycling of “scrap” material on a manufacturing floor to be put into a product. The PIR material does not leave the building where it was originally generated and is collected there to be recycled into a new product. Capturing PIR is often considered “standard” and just a matter of doing good business, which is why it is sometimes criticized as greenwashing when used for sustainability claims by companies.

WHY USE PCR?

- Reduces use and extraction of virgin materials
- Reduces energy use and lowers emissions of product materials
- Helps to divert materials from landfills and overall reduces waste
- Regulatory and consumer pressures

CHALLENGES TO PCR

- Higher associated costs
- Lack of feedstock availability to meet rising demand
- Performance concerns regarding variations in color, transparency, texture, and durability
- Food contact challenges



High-quality PCR resin (left) may be clear or have a grayish texture. Lower quality PCR (right) may be black due to contamination.

Despite these challenges, norms around recycling and packaging are changing, leading to **a push for PCR materials by consumers and suppliers**. The upfront cost of PCR materials is not the main driver of companies deciding to/not to make this change. PCR demand is driven by its lower environmental footprint, in addition to an increased consumer desire for more sustainable products.

The hope is this will lead to more investments in the technology and infrastructure to support this demand and the processing of traditionally difficult to recycle plastics. Ultimately, PCR packaging opens new opportunities to reduce the demand for raw materials and the volume of plastics sent to landfills.

WHAT IS MEANT BY “VIRGIN” RESIN / CONTENT?

“Virgin” refers to the resin or content produced from the original feedstock which has never been used or processed before. The feedstocks might include petrochemicals (for plastic) or tree fiber (for paper).

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APPROVAL FOR PCR CONTENT & THE RECYCLING PROCESS

There is no official certification or certifying body for PCR content touching sensitive products. However, in response to industry desire to demonstrate official FDA review of their product material to their suppliers and customers, the FDA created a review process with the Letter of non/no Objection (LNO). This is mainly used to review recycled plastics in food packaging.

A LNO may involve a company submitting how they collect, clean, process, and test the PCR in their product(s). A LNO is not a sanction or approval. Instead, it serves as recognition by the FDA that they have reviewed the company's recycling process and determined that it has "no questions" regarding the sufficient removal of unwanted contaminants, and it meets their standards for food-safe plastics.

SUSTAINABILITY & PCR

3 Main Factors to Prioritize

- Recyclability
- Potential to be littered after use instead of recycled
- Content or Make-up
 - Is it made with renewable resources; is it helping to reduce reliance on virgin material thanks to PCR?

What Does Atlantic Prioritize?

We optimize for reducing waste impacts wherever we can. Ideally, we want a product that uses PCR and is also recyclable (again) instead of being littered or tossed in the trash.

However, we may have to choose between:

- A virgin product that is recyclable;
- A product with PCR that is not recyclable.

To reduce waste to landfills and into the environment, we generally prioritize the virgin product that is recyclable over the one with PCR that is not recyclable.

Check out the example below of how we might assess several options.

For the items that can be packaged in flexible plastic or paper,

WHAT'S THE MOST SUSTAINABLE?

Not Great

Fine

Better

Best



Typical Flexible Plastic

- Not curbside recyclable
- Potential to be littered
- Made with non-renewable resources



Flexible Plastic that can be Recycled via Store Drop-Off

- Not curbside recyclable but can be recycled at retail locations
- Potential to be littered
- Made with non-renewable resources



Flexible Plastic with PCR that can be Recycled via Store Drop-Off

- Not curbside recyclable but can be recycled at retail locations
- Potential to be littered
- Made with non-renewable resources



Curbside Recyclable Paper-Based Packaging; May Have Recycled Content

- Curbside recyclable
- Lower potential to be littered
- Made with renewable resources; may also have some recycled content