



BITS ON SUSTAINABILITY

Pre-consumer waste or Post-consumer waste?

im:pact

Life Cycle Assessment (LCA) is an objective method of assessing and quantifying the environmental footprint associated with a product throughout its life cycle, a key issue for integrating circular economy principles into production processes.

In 2021, Fedrigoni developed **Im:pact**, twin tools (Eco-design Tool) - third-party verified - for calculating the energy, water and carbon footprint of our paper product families and self-adhesive materials. The tools are aligned with internationally recognized best practices (ISO 14040 series standards) and enable clear reporting of the three environmental indicators (energy, water, and CO₂ emissions) on demand with a cradle-to-gate approach, i.e., from the extraction of raw materials to the exit from our mills. For both tools, there is then the possibility of quantifying the end-of-life (EOL) impact of the finished product as additional information.

The adoption of Im:pact to measure the environmental impact (LCA) of our papers shows that:

- the use of **POST-cw** pulp **contributes to the carbon footprint** of our finished products; in particular, in the case of virgin pulp, the carbon footprint is attributable to the impact related to the extraction and processing of raw materials and from their transportation; in the case of POST-cw pulp, the impact stems from the recycling process to which the waste is subjected and from the transportation of the pulp to the plant gate.
- Conversely, **PRE-cw** (both in-house and off-site), being reused without undergoing any recycling operation, **does not contribute to the carbon footprint** of our papers. In fact, the environmental

Bits on sustainability are written by Fedrigoni's Sustainability Team and are part of the Group commitment to spread the culture of sustainability.

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Paper production cutouts reintroduced into the production process

impacts associated with the production of PRE-cw are attributed to the system that generated it and do not have to be re-counted at the time of its reuse to avoid double counting.

Within our product environmental impact quantification tool Im:pact:

- impacts related to the use of PRE-cw from internal rejects fed back into the production cycle are zero, since they are already considered in the modeling of the overall efficiency of each plant;
- to the use of PRE-cw purchased from outside, only impacts related to the transport of pulp to the plant are attributed.

This is why Fedrigoni has always promoted an approach that prefers the reuse of PRE-cw (as opposed to POST-cw) within its papers, thereby protecting technical performance.

Definitions:

Pre-consumer waste (PRE-cw or post-industrial waste)

Pre-consumer waste is a material that was discarded before it was ready for use or used by the consumer. Examples: reintroduction of production waste (such as scraps from paper production and self-adhesive materials) into the production process and unpurchased newspapers.

Post-consumer waste (POST-cw)

Post-consumer waste is material discarded after use. Post-consumer waste has served its intended purpose, flowed through the consumer, and has been discarded for disposal or recovery.

Fonti:

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