



PRESS RELEASE
Immediate release

Luminy® Recycled PLA Life Cycle Assessment released by TotalEnergies Corbion

GORINCHEM, The Netherlands, 17th January 2024 – TotalEnergies Corbion has just published the Life Cycle Assessment (LCA) for **recycled Luminy® PLA**, titled [Life Cycle Assessment of PLA through Advanced Recycling - Utilizing Waste Streams as Feedstock for a Biobased Polyester](#). The study concludes that the advanced recycling of PLA as a production process has a lower impact compared to its production from virgin feedstock. Specifically, the Global Warming Potential (GWP) of Luminy 30% rPLA, considering its biogenic carbon content, is 0.19 kgCO₂/kg of PLA, whereas virgin Luminy PLA emits 0.51 kgCO₂/kg of PLA.

In this report, seven impact categories were considered, including GWP, water consumption, and land use. Luminy® recycled PLA, integrating 20% and 30% recycled content, significantly mitigates impacts across these categories compared to virgin PLA, illustrating the environmental benefits of this pioneering recycling methodology over traditional virgin production.

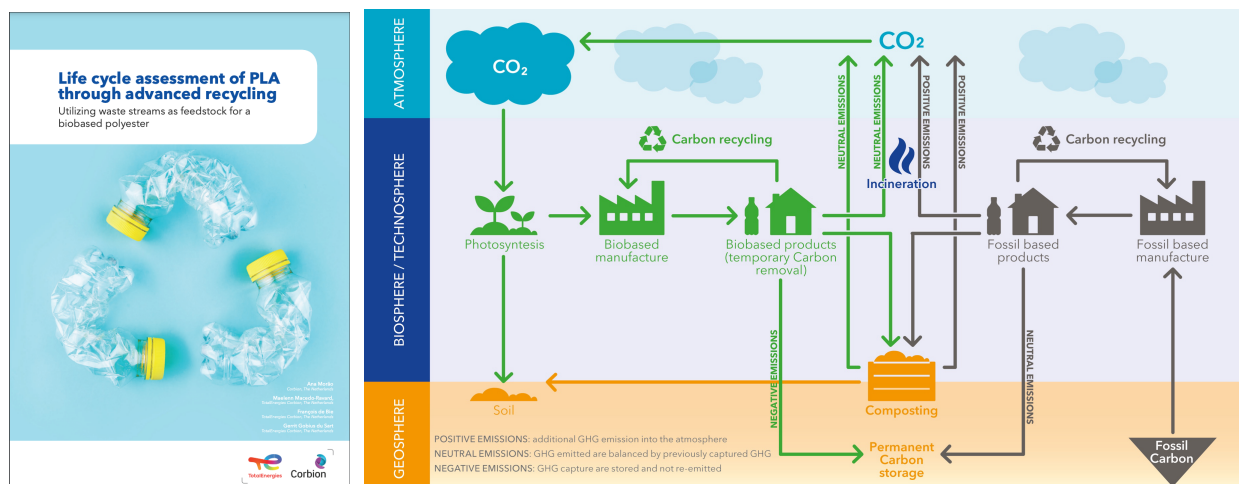
The company's assessment highlights the importance of considering the temporary carbon storage in products which is key for biobased materials. By analyzing the carbon cycle for both biobased and fossil-based products, the report emphasizes the role of biogenic carbon content in PLA. Recycling PLA allows a longer storage of this biogenic carbon which is originally from the atmosphere. Notably, when factoring in biogenic carbon content, the GWP of 30% recycled PLA is reduced by 300 kgCO₂/tPLA compared to virgin PLA, marking a significant step towards achieving global climate targets.

Maelenn Ravard, Regulatory and Sustainability Manager at TotalEnergies Corbion, underscores the significance of advanced recycling, stating, "Depolymerizing PLA via hydrolysis is an energy-efficient process allowing us to close the loop and increase circularity for a biobased material. The LCA results only confirm this statement."

LCAs evaluate a product's environmental impact across a defined life scope. The company's new comprehensive analysis showcases results for the production stage of the material which can further be completed by the other stages of the material life cycle. Recycling biobased materials has many advantages including a reduced carbon footprint, the avoidance of agricultural impact, and a sustainable end-of-life.

Concurrent with the LCA results, TotalEnergies Corbion's [recent announcement](#) of its alignment with the United Nations Global Compact initiative reaffirms its commitment to sustainability. This collaboration further reinforces the company's adherence to universal sustainability principles, actively supporting the UN's Sustainable Development Goals through responsible production practices and collaborative initiatives across its value chain.

To read the *Life Cycle Assessment of PLA through Advanced Recycling - Utilizing Waste Streams as Feedstock for a Biobased Polyester*, visit <https://www.totalenergies-corbion.com/news/luminy-recycled-pla-life-cycle-assessment-released-by-totalenergies-corbion/>



Carbon cycle throughout the life of a product

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Corbion

About TotalEnergies Corbion

TotalEnergies Corbion is a global technology leader in Poly Lactic Acid (PLA) and lactide monomers. PLA is a biobased and biodegradable polymer made from annually renewable resources, offering a reduced carbon footprint versus traditional plastics. The Luminy® PLA portfolio, which includes both high heat and standard PLA grades, is an innovative material that is used in a wide range of markets from packaging to consumer goods, fibers and automotive. TotalEnergies Corbion, headquartered in the Netherlands, operates a 75,000 tons per year PLA production facility in Rayong, Thailand. The company is a 50/50 joint venture between TotalEnergies and Corbion. www.totalenergies-corbion.com

About TotalEnergies

TotalEnergies is a global multi-energy company that produces and markets energies on a global scale: oil and biofuels, natural gas and green gases, renewables and electricity. Our 105,000 employees are committed to energy that is ever more affordable, cleaner, more reliable and accessible to as many people as possible. Active in more than 130 countries, TotalEnergies puts sustainable development in all its dimensions at the heart of its projects and operations to contribute to the well-being of people. www.totalenergies.com

About Corbion

Corbion is a sustainable ingredients company dedicated to preserving what matters, including food and food production, health, and the planet. We specialize in lactic acid, lactic acid derivatives, food preservation solutions, functional blends, and algae ingredients, using our deep application and product knowledge to propel nature's ingenuity through science. With more than a century of experience, we continue working side-by-side with our customers to make our cutting-edge technologies work for them. Leveraging our advanced capabilities in fermentation and preservation technology, we help customers differentiate their products in diverse markets ranging from food and animal nutrition to home & personal care, pharmaceuticals, electronics, medical devices, and bioplastics. In 2022, Corbion generated annual sales of €1,457.9 million with a workforce of 2,601 FTEs. Corbion is listed on Euronext Amsterdam. For more information: www.corbion.com

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