



Post Rock (a Recycled Plastic & Mineral Composite Panel for Rainscreens (Building Cladding))

TECHNOLOGY NUMBER: 7743



[Accelerate Blue Foundry - 2025 \(Physical Sciences\)](#)

OVERVIEW

Post Rock is pioneering a future where mixed plastic waste and mineral aggregates are transformed into high-performance facade panels with the visual appeal of stone and a fraction of the carbon footprint—turning plastic waste from a liability into a valuable asset for the built environment. The patented process produces durable, aesthetically unique panels using regionally sourced post-industrial plastics, reducing traditional material costs and environmental impact while strengthening circular supply chains.

DESCRIPTION

Post Rock's technology blends locally available, mixed plastic waste (including material from regional automotive manufacturing) with mineral aggregates, such as gravel, sand, and glass, to create facade panels through a patented thermocasting and molding process. The process leverages programmable heating and rotational molding techniques to replicate the geological processes that lend natural stone its variable texture and patterning, yielding panels with distinctive, customizable visual character and superior mechanical properties.

Technology ID

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Category

Materials

Engineering & Physical Sciences

Accelerate Blue Foundry -

2025/Physical Sciences

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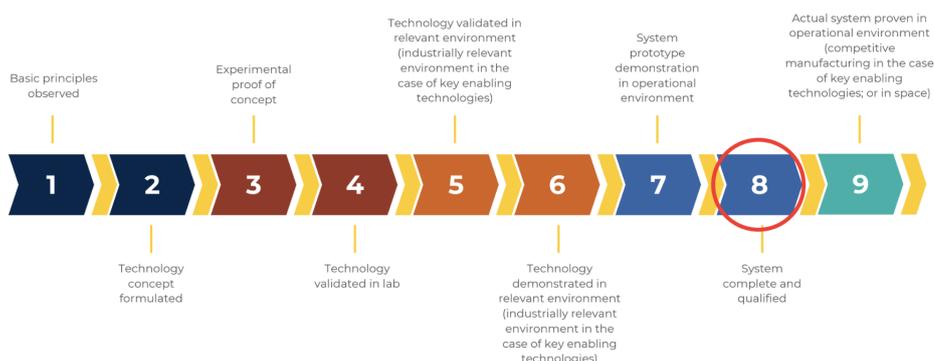
What sets Post Rock apart is its integration of waste stream analysis, regional value chain mapping, and direct engagement with industry standards organizations—ensuring not just technical viability, but strategic alignment with evolving sustainability metrics in construction.

VALUE PROPOSITION

- Turns regional mixed plastic waste into sought-after building products, eliminating dependency on virgin materials and offering a competitive, lower-carbon substitute for common facade materials such as metal or stone.
- Enables customization through variations in color, texture, and patterning.
- Positions itself at the front of architectural sustainability through breakthroughs in Environmental Product Declarations and circular economy alignment, maximizing climate impact and market credibility.

TECHNOLOGY READINESS LEVEL

Technology Readiness Levels



INTELLECTUAL PROPERTY STATUS

All Issued Patents:

- [US11623372](#)
- [MX2020004480A](#)

Other Patent Application Pending.

MARKET OPPORTUNITY

There is a growing demand in construction, architecture, and urban revitalization for innovative facade materials that combine aesthetics, high performance, and verified sustainability credentials. Post Rock directly addresses these needs, and its technology has demonstrated appeal for retrofit, new build, and high-profile architectural projects seeking both climate impact and visual distinction. By mapping local value chains and addressing standards for sustainability reporting (such as Environmental Product Declarations), Post Rock can unlock new opportunities in public and private construction, especially as regulatory and market pressures drive adoption of low-carbon, circular products.

Explore other available products test at [University of Michigan](#)

Supported by over \$300,000 in funding—including major NSF and ADVANCE grants—and recently granted patents in the U.S., Canada, and Mexico, Post Rock is well-positioned to capture a growing share of the green building materials market, which is projected to exceed \$523 billion by 2026 (with demand for recycled-content products accelerating globally).

- This project has participated in Customer Discovery