

The Sustainable Attributes of Exterior Cladding Materials

A True Look at “Green” Claims



Clay Brick – The Most Sustainable Green Building Material Made

FIBER CEMENT VS. BRICK

Prior to making decisions on cladding materials and their impact on the environment, it's important for builders to consider the true facts regarding siding products' green positions. Many materials claim green or sustainable attributes, but a comparison between fiber cement and brick shows the true story. A quick review of the facts will show that fiber cement is not as green as you think.

IN THE MANUFACTURING PROCESS

RECYCLED CONTENT

FIBER CEMENT

- CertainTeed claims up to 30% pre-consumer recycled content.
- James Hardie does not claim any recycled content.

BRICK

- Contains both pre- and post-consumer recycled content, depending on the manufacturer.

MANUFACTURING AND DISTRIBUTION

FIBER CEMENT

- Uses a significant amount of energy, water, and silica.
- Manufacturing process harmful to water conservation and air quality.
- Some manufacturers import wood pulp from Australia and New Zealand.

BRICK

- Waste products such as methane gas from landfills and sawdust used in production, depending on the manufacturer.
- At least two plants located within 500 miles of all but one of 50 largest MSAs.

THIRD PARTY CERTIFICATION

FIBER CEMENT

- CertainTeed has their fiber pulp certified from “sustainably managed forests”.
- James Hardie has no certification.

BRICK

- Manufacturers can achieve third-party certification for extent of recycled content, use of alternative energy, and amount of resources reduced.

ON THE JOB SITE

WASTE MANAGEMENT

FIBER CEMENT

- Cannot recycle scrap materials
- Materials must be wrapped prior to installation.
- Has highest pollution index of cladding materials, according to ATHENA Sustainable Materials Incentive.

BRICK

- Reusable scrap materials, minimal packaging.
- Very little on-site waste produced due to modular units.

ENERGY EFFICIENCY

FIBER CEMENT

- Homes clad with fiber cement use approximately 2%-7% more energy than homes clad with brick.

BRICK

- Thermal mass properties.

LIFE CYCLE & DURABILITY

FIBER CEMENT

- Long term performance is unknown.
- Continuous maintenance needed starting within 10 years.

BRICK

- 100 year life span.
- Low maintenance requirements.

SAFETY & SECURITY

FIBER CEMENT

- Does not provide 1-hour fire resistance rating.

BRICK

- Provides 1-hour fire resistance rating.
- Offers superior resistance to wind-blown debris.

RECYCLABILITY

FIBER CEMENT

- Cannot be and is not recycled.

BRICK

- Unfired or scrap brick is recycled back into the production stream.
- Brick from demolition can be crushed and recycled into new brick or used as brick chips.
- Brick can also be used as a subbase material for pavements.

According to experts and certification groups, the future of green home building and sustainable design resides in the life expectancy and life cycle of the building, energy efficiency, and the impact building materials have at the end of their useful life. The Brick Industry offers building professionals a product that assists in all three areas.

BRICK IS A NATURALLY SUSTAINABLE MATERIAL

- ▶ Use of abundant natural resources, clay and shale.
- ▶ Improved manufacturing processes use less energy and reduce emissions.
- ▶ Use of alternative fuel resources such as landfill gas and wood waste materials.
- ▶ Strategically located plants to help reduce transport emissions.
- ▶ Contributes to energy efficient homes with high thermal mass.
- ▶ Long life cycle, durable, low maintenance, no painting required.
- ▶ Recyclable and biodegradable thereby reducing its embodied energy.
- ▶ A built-in and in-demand market for recycled re-use of old brick.

BRICK IS NOT ONLY A SUSTAINABLE CLADDING MATERIAL, BUT IT ALSO ADDS SIGNIFICANT VALUE TO A HOME AND OFFERS NUMEROUS OTHER BENEFITS

- ▶ Consumers prefer brick over other cladding/siding materials.*
- ▶ Brick's natural beauty is timeless and design possibilities are endless.
- ▶ Brick's longevity and local availability make it one of the greenest building products made today.
- ▶ Brick conveys a message of quality, image, and prestige about the home builder and community.
- ▶ Brick has the longest history of product performance and durability.
- ▶ Brick is virtually maintenance-free.
- ▶ Brick is a perfect fit within any architectural style.

* Source: Ducker Worldwide 2008 homebuyer research study

BRICK: THE GREEN POINTS ADD UP

National Green Building Standard™

Brick can assist in contributing up to 175½ points out of approximately 2,000 possible points

LEED for Homes™ (USGBC)

Brick can assist in contributing up to 19½ points out of a possible 136 points

FOR MORE INFORMATION ON THE SUSTAINABLE ATTRIBUTES OF CLAY BRICK, CONTACT THE BRICK INDUSTRY ASSOCIATION.



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