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# eco-structure

Improving environmental performances of buildings and their surroundings

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Presidential  
Center Marks an  
Environmental  
**LEGACY**

Unraveling  
**TITLE 24**

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Cradle to Cradle  
**Certification**

# BAMBOO EVOLUTION

A Renewable Resource Is Coming of Age



BY SVEN EBERLEIN

**T**o be persuaded of the physical qualities and inherent environmental values of bamboo, one need not venture into faraway and exotic lands. Who hasn't heard a friend or neighbor complain about bamboo taking over their backyard? A long sigh followed by "It's beautiful, but it's just so resistant and fast growing!" tells the story of this grass—that many consider wood—better than a long list of technical specifications. However, if you're an architect or designer, the fact that bamboo can be manufactured into planks and sheets of up to 3,000 pounds per square inch in hardness with a slip-resistance coefficient of well above 0.5 makes for a convincing spec sheet to back up the anecdotal evidence.

## BAMBOO'S GREEN HISTORY

Used for centuries in Asia and other tropical parts around the world for everything from

construction material to food, bamboo as a commercially viable building resource did not reach U.S. shores until the late 1980s. Once it gained a foothold, however, word of bamboo's many benefits spread as rapidly as its shoots. Within a decade, laminated bamboo flooring entered mainstream consciousness, becoming a household name among professionals and homeowners alike.

Bamboo flooring's proven track record of strength and durability, along with growing public environmental concern, provided a fertile breeding ground for manufacturers to take the "supergrass" to the next level, resulting in a whole range of interior building materials, from veneer and paneling to dense and sturdy plyboard.

Today there's hardly a traditional wood species that bamboo can't compete with in

terms of durability and diversity of application. Sheets are up to 1 1/2-inches (38-mm) thick and 13-feet (4-m) long; standard sheets tend to be 3/4 by 48 by 96 inches (19 by 1219 by 2438 mm). They can be custom stained and treated to meet Class A fire-rating requirements. Some of the leading manufacturers of bamboo products have managed to reduce adhesive formaldehyde levels to zero, making bamboo plyboard a truly green alternative not only for its renewable qualities but for its eco-friendly construction.

## TESTIMONIALS

Kelly Hill and Larisa Pedroncelli of Factory 1 Design in San Francisco have been working with bamboo sheet goods since 1998, custom building furniture and architectural elements for commercial and residential interiors.

"Obviously, the sustainable sourcing aspect was one of the first things that drew us to bamboo ply," says Hill, adding that one of the greatest benefits of working with bamboo plyboard is the consistency of the material.

"Bamboo ply benefits our design process because of the strength of the material. It carries a great load-bearing capacity and often allows for longer spans than conventional plywoods, giving us greater flexibility and creativity from design to fabrication."

For Pedroncelli, a compelling reason for using bamboo plyboard lies in the timeless nature of the color and grain of the edge grain sheet goods. "Working with the edge grain takes on an abstracted nature, especially on a large scale or when it is stained. Many people don't recognize it as bamboo until you look closely. Its ability to take stain and clear finishes further abstracts the material."

Hill and Pedroncelli are convinced bamboo plyboard holds an intrigue edge over common wood products, making it a material that will outlast trends and be a staple for years to come. And if this rise in popularity continues, who is to say that there couldn't be a domestic infrastructure to support its commercial growth? Just keep looking out the rear window. 🌱

*Sven Eberlein is marketing director for Smith & Fong Co., South San Francisco, Calif. He can be reached at (650) 872-1184 or [sven@plyboo.com](mailto:sven@plyboo.com). Visit the company's Web site at [www.plyboo.com](http://www.plyboo.com).*

