



The Green Door

The Green Door is a monthly newsletter of sustainable living geared to present and future homeowners.

Fall 2007

"I am committed to a delightfully diverse, safe, healthy and just world; filled with clean air, water, soil and power that is economically, equitably, ecologically and elegantly enjoyed." - *William McDonough*

Bamboo Floors

So, you fallen in love with the look of bamboo floors and you're ready to install them in your own home!! You head down to the store and start looking at all the choices. Solid or engineered, pre-finished or unfinished, vertical or horizontal grain, natural or carbonized, easy-lock or tongue and groove, or maybe you like the woven bamboo? What kind of underlayment? OK, so there are many bamboo flooring types and you need to select the best floor for you. Here's some help for sorting out all the options.

Bamboo floors are the icon of green architecture. Bamboo is incredibly fast growing, harder than oak and very good looking. But, not all bamboo is the same and some people have had disappointing experiences with it. The problem is that the floors many companies are importing are substandard for a number of reasons: cheap/bad glues, poor milling, inferior finishes, poor presses, immature poles used to produce the flooring, or the poles are grown in an area that does not have the ideal growing conditions (soil/climate/altitude, etc). The result is soft flooring that may easily cup, warp, delaminate and dent. The hardest bamboo takes 5 years to mature, any younger and it will not have the strength you are looking for. Another way to check the quality before you buy is to look for the seams in the samples. The best quality bamboo is milled and put together with very precise German equipment so the seams are perfect. The seams should be so compact that you never see peeling on the sides.



Solid vs. Engineered

Solid bamboo flooring actually consists of many strips of bamboo glued together to create a plank. The grain of a solid floor is oriented in one direction throughout the body of the plank. An engineered floor has a "cross-laminated" core, usually made of wood, a solid floor does not and must be placed on a healthy plywood sub-floor. Solid floors are cheaper to produce and therefore cost less. They are also aesthetically pleasing to a consumer who likes the notion of a 100% bamboo floor.

Engineered floors can be "floated". This means that rather than nailing or gluing the planks to the sub-floor, the boards are edge-glued together above an underlayment. A floor may be floated above a concrete sub-floor, above radiant heat and in condominiums where a nail-down floor is either not possible or not permitted. Other advantages of a floated floor are that much less sound travels from the floor above to the living space below. Engineered bamboo also expands and contracts as one giant piece, rather than as individual boards, like solid floors.

Vertical Grain vs. Horizontal Grain

Also referred to as VG or HG, the "grain" refers to the way the bamboo pole is cut. A vertical grain cut produces thin strips, about 1/4 inch wide, that give the bamboo a traditional hardwood look. Horizontal grain cuts produce wider strips, about an inch wide, with a more pronounced "bamboo look".

Natural Color vs. Carbonized vs. Stained

Bamboo's natural color is a light golden tan. Bamboo can be heat-treated in a process called "carbonizing" to darken the wood. Typically, the longer bamboo is heated the darker the color and the softer the material will be. Certain selections of bamboo are stained as well as prefinished. Unfinished bamboo can be stained any color you choose! To check the finish quality use a coin and scrape the surface. If it flakes off, the product will not perform for more than a few years and complete refinishing will be needed. Checking for hardness is as simple as pressing a fingernail into the face of the board. Some lower priced brands will almost ding when they see a fingernail.

"Our ideals, laws and customs should be based on the proposition that each generation, in turn, becomes the custodian rather than the absolute owner of our resources and each generation has the obligation to pass this inheritance on to the future." - Charles A. Lindbergh

Woven Bamboo

In addition to horizontal and vertical grain bamboo there is "strand-woven" or woven bamboo. Woven bamboo is produced from the excess strands trimmed from the bamboo stalk at the stage of milling. Nothing is wasted! The newly constituted bamboo timber is a beautiful, strong and durable material that is then sawn into attractive planks. Because strand-woven bamboo is already compressed at extremely high pressure at the timber-making stage, it does not receive the final pressing applied to horizontal and vertical grain bamboo. Woven bamboo flooring is scratch, UV and moisture resistant.

Flooring Underlayment

If you install carpeting without a pad, it will not be as comfortable to walk on and it will wear out faster. If you install tile on a cracked concrete sub-floor it will eventually crack the tile and grout. If you install a wood, cork, or bamboo floating floor on an unlevel sub-floor, the edges will not fit well together. Consequently you will stub your toes and eventually destroy that part of the floor. No matter what product you install on the floor, the sub-floor must be 1) level, 2) dry, and 3) solid. Your floor is only as good as the surface it is installed over.

There are many types of underlayment for each type of flooring depending upon the current challenge with your sub-floor, or the one you are trying to avoid in the future. Plus many underlayments are non-toxic. Examples include cork, 15# Felt, Kraft paper, Bamboo Charcoal Fabric, RB Silent-Tread and SCI Invincible and Titanium.

If you have radiant in-floor heating, either hydronic or electric, it will be affected to some degree by any underlayment. That means the heating coming through the floor will be reduced, depending upon the R-value of the underlayment. Cork underlayment, for example, is a superb thermal insulator and would not be a good choice. A synthetic rubber padding, on the other hand, has low R-values and is well suited to in-floor heating.

Care & Maintenance

Bamboo is perfect for almost everywhere in the house and that includes kitchens and bathrooms. But, as with many wood floors, routine maintenance can add years to its life. For bamboo floors getting intense use, Alicia Silva of Synergy Design Studio in Seattle, recommends Bonatech Traffic brand wood floor finish. This is a commercial grade, waterborne finish with minimal VOCs. Routine care and maintenance includes:

Place doormats or rugs at entrances to collect moisture, sand, grit and other potentially damaging substances from being tracked onto your bamboo floor. Dust mop or vacuum with a soft accessory to keep your bamboo floor clean from dust, dirt or grit. For sticky spots, use a soft damp cloth to gently scrub the floor. If necessary, use a generic hardwood floor cleaner. Do not use steel wool or other abrasive scouring pads. Do not use harsh detergents, abrasive cleansers, or corrosive chemicals to clean your bamboo floor. Avoid excessive water. Use mats in the kitchen, bathroom and laundry room to protect against spills. If a spill occurs, blot it up immediately with a dry cloth or slightly damp mop. Use only colorfast and non-scratch carpeting or pads on your bamboo floor. Protect the floor from furniture legs and do not walk on the floor with high-heeled shoes. Although some bamboo flooring has effective UV inhibitors in its pre-finish, it is recommended that it not be exposed to direct sunlight for long periods.



In many ways bamboo has a long way to go. As of yet there is no FSC or Fair Trade certified bamboo. There is also no local source for bamboo. Most bamboo is shipped from China, which flies in the face of our obsessions with local sourcing. And, most bamboos have formaldehyde binders. There are however certain companies, like Teragren and Bamboo Hardwoods, that make a point of addressing these issues. For a great article on this topic visit http://www.treehugger.com/files/2005/09/bamboo_flooring.php.

The Green Door is brought to you by Cally Fulton and Danielle Johnson, both Real Estate Associates with GreenWorks Realty, Seattle and by JR Fulton, Architect and LEED Accredited Professional.

To save trees and expand the opportunity to share information, please provide us with your e-mail address and the addresses of others interested in sustainable living.

Please email ideas and submissions to danielle@greenworksrealty.com.

If you or someone you know would appreciate our real estate services please call-

Cally Fulton(206)786-5061 or Danielle Johnson(206)679-0185

GreenWorks Realty
7406 Greenwood Ave, Suite A
Seattle, WA 98103

206.283.8181 (office)
206.781.0043 (fax)

greenworksrealty.com