

## **Sustainable Flooring: Bamboo**

Bamboo: it's not just for panda bears anymore. In fact, many builders interested in building sustainable homes are choosing bamboo as a flooring option. Bamboo flooring has grown in popularity because it's better for the environment, is extremely durable, and looks great in homes.

Bamboo is actually not a wood at all, but a grass. It's attractive as a building material because it is very hard, strong, and dimensionally stable. Environmentally, it's hard to argue with a wood-substitute that matures in three to seven years, regenerates without the need for replanting, and requires minimal fertilization and pesticides. In fact, larger species of bamboo have been used in construction for thousands of years, and even in modern Asian cities it's not uncommon to see a large concrete building being constructed from bamboo scaffolding.

To make bamboo flooring, the hollow round shoots are sliced into strips, which are boiled to remove the starch. The strips are dried and laminated into solid boards. The bamboo is treated with preservative, either before it is laminated, after, or both. Most manufacturers offer both a light, natural-color flooring and a darker, amber variety. This amber color is achieved by pressure steaming the bamboo, which darkens it by carbonization.

All the products are laminated using urea-formaldehyde (UF) adhesive. Check to see which manufacturers offer products with a low level of adhesive, as UF resin tends to off-gas formaldehyde after production (although the amount of resin in a laminated bamboo product is much less than in a particleboard-type product).

Nearly all bamboo flooring sold in North America is produced in the southern Chinese province of Hunan in an area known as "the bamboo sea" for its extensive bamboo forests. The harvesting in these forests is not a threat to pandas, as they live at much higher elevations and eat a different species of bamboo.

Use conventional installation techniques to install bamboo flooring, following the manufacturer's instructions, and using the recommended adhesive or fasteners. Here are some helpful installation tips:

- Begin by checking the subflooring to make sure it's clean and free of defects and debris. Make sure concrete floors are fully dry and sufficiently cured before installation.
- Leave the laminate flooring out 24 to 48 hours before installation so that it can acclimate.
- Make sure a continuous vapor retarder is in place before installing the flooring. The installer should overlap the vapor retarder sheets, and seal the joints with adhesive tape.
- Use 1/4" shims or spacers between the planks and the wall to provide an expansion/contraction joint. Spacing the flooring away from the walls allows the finished flooring and the subflooring below it to expand and contract without warping or buckling. Spacers should go in about every 12" and at every joint between planks. Base molding will hide the gap.
- For the best appearance, lay the planks parallel to the longest wall.
- Stagger the joints. Make sure the joints aren't lined up row-to-row; row-to-row joints weaken the floor.
- With each strip, tap a rubber mallet or hammer against the scrap piece to knock the new strip into position and eliminate the appearance of a seam where the pieces interlock. Continue the process throughout the room. Be sure to finish off the floor by removing the spacers when the floor is complete.

By choosing bamboo flooring over standard hardwood lumber, builders can market strong, durable floors that give a unique look to the home and are better for the environment.