

What About Fiberboard For Green Building?

Cellulosic fiberboard panels are ideal green building components. They are manufactured with natural and recycled fibers and bonded with renewable vegetable binders. “Green building (also known as green construction or sustainable building) refers to a structure and using process that is environmentally responsible and resource-efficient throughout a building's life-cycle: from site to design, construction, operation, maintenance, renovation, and demolition.” (Wikipedia—Green Building). An important start to any green building strategy is to choose environmentally responsible and resource efficient building materials. Cellulosic Fiberboard, a/k/a “Fiberboard,” fits the bill.

Fiberboard panels are manufactured with natural cellulose fibers, from renewable, reused and recyclable materials. No virgin old growth timber or tropical forest fiber content are found in these panels. Recycled content in the form of saw mill trim, sawdust, planer shavings and whole wood chips are put to good use. Other recycled material may include construction waste, demolition wood, post-consumer kraft paper, newsprint, and office paper. In fact, virtually any cellulosic fiber of acceptable geometry can be utilized for fiberboard, either alone or as a supplement to more commonly available wood fiber. Non-wood fiber sources such as wheat straw, rice straw, kenaf, and other plant fibers have also been used.



Fiberboard composition is achieved through wet process fiber-to-fiber hydrogen bonding and integral inter-knitting of the fibers during panel formation. Eco-friendly vegetable-based starch binders (adhesives) add to the product’s renewable content and desired properties. Consequently, synthetic adhesives like phenol and urea-formaldehyde are not used in the process. Chlorinated hydrocarbons or other ozone-depleting chemicals are not used. Blowing agents like pentane are unnecessary. The continuously-formed fibrous “mats” (unfinished panels) are dried via gradual drying. The product is not subject to high pressure and temperature to cure a resinous adhesive binder.

Wet process fiberboard manufacturing utilizes closed-loop water systems that recycle large volumes of water. These closed-loop water systems eliminate discharge of process water. Some participating companies collect wood sugars released in the manufacturing process for use as livestock feed supplements.

Recycled content in fiberboard eliminates the necessity of burning and/or disposal of the waste materials by other means. Thus, release of carbon to the atmosphere is decreased and the carbon cycle is extended for the life of the product. In addition, fiberboard is landfill friendly. These panels release no toxic chemicals. Alternatively, fiberboard can be reduced to fibers and reintroduced into the fiberboard manufacturing process as a supplemental material much like kraft paper or other reused or recycled content.

Energy efficiency is another positive fiberboard feature for sustainable building. It's relatively low density makes it an excellent insulator. In low-slope commercial and industrial roofing applications fiberboard provides a uniform, flat base for the finished roof system. The product is widely used as a cover board over foam in new construction and as a high performance base for reroofing projects.



The **American Fiberboard Association** (Rolling Meadows, IL) is the North American trade organization for cellulosic fiberboard producers (www.fiberboard.org). The members of the AFA are the following companies:

- **Blue Ridge Fiberboard** (Danville, VA)
- **Building Products of Canada** (LaSalle, Quebec, Canada)
- **Georgia-Pacific Wood Products LLC** (Jarratt, VA)
- **Huebert Fiberboard** (Boonville, MO)
- **International Bildrite** (International Falls, MN)
- **Louiseville Speciality Products** (Louiseville, Quebec, Canada)
- **Temple-Inland** (Diboll, TX)
- **Western Louiseville Fiberboard** (Calgary, Alberta, Canada)

The above manufacturers support several green and sustainability initiatives to deliver products with exceptional environmental benefits. Some of the initiatives supported by the various manufactures are:

- **Scientific Certification Services (SCS)** for pre-consumer fiber content
- **NAHB Green Building Standard** for recycled and SCS-certified wood-based content
- **LEED (US Green Building Council)** for MR 2, 4, 5, 6, EQ and IEQ credits
- **Forest Registry** for Canadian wood fiber sources
- **Energy Star for New Homes (Canada), Built Green Alberta**
- **Green Building Initiative (US)** promoting building practices that yield sustainable, healthier, and energy efficient buildings through green building approaches.

Fiberboard is manufactured to specific requirements set forth in ASTM C208, Standard Specification for Cellulosic Fiber Insulating Board and CAN/ULC-S706-09, Standard Specification for Wood Fibre Insulating Boards for Buildings. For detailed fiberboard manufacturer and product information, visit the company websites which are listed on the 'Sources' page at www.fiberboard.org.

AFA member producers of fiberboard are committed to the responsible and efficient use of resources, safe workplaces, and protection of the environment today, tomorrow, and in the future.