

Green materials

engineered wood (also called composite wood)



WHAT IS ENGINEERED WOOD?

When raw timber is processed into wood products there is waste. This wood waste is combined with adhesives and other components and heated to make engineered wood. These are some engineered wood products “composite materials”:

- **Plywood**
- **Particle Board**
- **MDF** (Medium-Density Fiberboard):

Engineered wood products are considered “**green materials**” because they are made with “waste” produced by processing raw wood and also, very probably its origin is controlled.

PLYWOOD

- Plywood is made of sheets of wood veneer pressed and bonded together. Plywood comes in different grades which are determined by the type of wood ply, thickness, adhesive, and the manufacturing process.
 - There are many types of plywood, describe the use or application clearly in your documents so that the contractor can choose the type.
 - Plywood is a very strong material, comes in different thicknesses and holds fasteners well.
 - Available with no VOCs.
 - It is also more expensive than other boards.
 - The edges have to be finished because the layers show.
 - It can splinter and is difficult to cut.

PARTICLEBOARD

- Particleboard panels are made from a mix of wood chips and other wood waste, resin, and chemicals. Chemicals are added to make particle board fire-proof, water-resistant, and insect-resistant. This liquid mixture is made into a sheets. Plywood for exterior use should be pressure-treated (you can tell because it is green).
- OSB (oriented strand board) is a type of particle board which can be used in some applications such as floor bases.
 - Particle board is low-cost and light-weight.
 - It is low-strength so it cannot support heavy loads.
 - Expands and discolors with moisture.
 - Grades:
 - A & B: Highest quality and most expensive.
 - C & D: Economical grades

MDF (MEDIUM DENSITY FIBERBOARD)

- MDF panels are made from wood fiber, resin, and wax mixed together and heated. MDF has no visible grain, rings, or knots.
- MDF is stronger and denser than plywood and does not shrink or expand.
- It is typically the best choice as the core of woodwork veneered with more expensive woods. It is also great for panels that are scheduled to receive opaque finishes (paint). MDF is the standard core for woodwork in RMW specs.
- It is low-cost, has a smooth surface, and is easy to paint and easy to cut.
- Available with no VOCs.
- Disadvantages: It is heavier than other wood products and cannot be stained.
- MDF comes in three types: Regular, moisture-resistant, and fire-retardant (NOTE: It is not waterproof or fireproof).

RECYCLED WOOD BOARDS - think about using these - ask for samples and consult the CBC.

