

Flooring 101: Solid vs. Engineered Wood Floors

When it comes to selecting a wood floor for your home, you have many decisions to make.

What type of species? Do I want a smooth or [distressed floor](#)? What color do I want?

But one of the most important question is what type of flooring "construction" do I want - [solid wood](#) or [engineered wood](#).

THE DIFFERENCE

[Solid wood flooring](#), as the name implies, means that each flooring board is made from one solid piece of wood. It is often assumed that solid wood flooring is not as stable as engineered wood flooring, but depending on the manufacturer, that is not always the case. For example, Carlisle floors are made from old growth heartwood to assure a tight, dense grain pattern for strength. Plus, it undergoes a proprietary, extended drying process. And unlike most flooring, our traditional Carlisle Custom Coat™ prefinishing is coated on all 4 sides to delay moisture absorption. As a result, we've been able to install our solid wood flooring over every type of radiant heat system and concrete surface for over forty years. Don't assume that a solid wood flooring option is not as stable as an engineered option, be sure to research the quality standards that go into it before making a final decision.

[Engineered wood flooring](#) means that each flooring board is made up of multiple flooring boards, to achieve the desired thickness and wear layer. Engineered flooring is often perceived to more stable than solid wood, but it can depend in the manufacturer, construction and quality characteristics (which we will talk about later) and where the flooring is going to be installed. For example, when installing flooring in drier climates engineered flooring can be less stable in some cases.

DIMENSIONS

Most people researching solid wood flooring and engineered wood flooring might not realize that the dimensions between the two options can be quite different. You may not be able to get the same widths and lengths with engineered wood as you can with solid wood. [This depends on the manufacturer you are working with.](#)

For example, about 90% of the floors available today as an engineered product are only up to 6' long and average about 2' long. Likewise they tend to be no wider than 4-5" wide. Using short, narrow flooring boards, such as in the Hickory flooring example below, will result in a floor with many more seams. This will make your room, and your overall space, look very busy.



Some manufacturers, offer engineered wood flooring in the same widths and lengths as the solid wood flooring options. This will dramatically improve the overall look of your floor as in this example of a wide plank Hickory [hardwood floor](#) installed in a home in Florida. It features engineered wood flooring crafted in 8" wide boards, up to 12' long and installed direct to a concrete slab.



THICKNESS

Solid wood flooring comes in a variety of thickness typically 1/2", 5/8" and 3/4" thick. There is very little difference in cost between 1/2" thick and 3/4" thick because you start with the same thickness when you the make the flooring. So making a floor 1/2" thick actually produces MORE waste than making a floor that is 3/4" thick.

Engineered flooring also comes in a variety of thicknesses. There are two components of "thickness" when considering Engineered flooring - that of the "backing", which provides the structure for the

flooring, and the "wear layer" which is the surface you walk on after it is installed (we'll talk more about Wear Layer in the next section). The backing of an engineered floor is comprised of multiple layers or "plies" of wood material. These ply's can be made from a variety of material including plywood, OSB, Baltic birch, or other hardwood material.

When looking at engineered flooring options the backing should be thicker than your wear layer to create the most stable engineered wood flooring board. If you are considering a floor where the backing and wear layer are of a similar thickness you can run into problems with stability, especially in areas where there may be excess moisture or seasonal changes in moisture and humidity.

In addition, you ideally want an engineered floor with at least **11-ply's and made from Baltic Birch premium hardwood plywood** - the best in the industry and known for its resilience especially in humid environments, making the floor more stable.

WEAR LAYER

The wear layer of your floor refers to the material above the tongue and groove - the part that you walk on. When considering [solid wood floors](#) or engineered wood flooring you ideally want a **3/16" thick wear layering** your flooring. **However, most engineered floors are made with a very thin layer, equivalent to only 3 sheets of paper!** This means that the wear layer of your floor will wear very quickly, it cannot be refinished or sanded, and thus your floor will need to be replaced more frequently.

If you choose a wood floor with a thicker wear layer you will ensure that your floor lasts longer, can be refinished (if necessary) and will present a lower cost of ownership over the life of your floor!

An important note about thickness and wear layer: the thickness of your backing and wear layer have a direct correlation to the cost of the product - the thinner it is, the less expensive the floor will be. While this might present a very economical solution for a potential customer, these thin engineered floors don't last long! While it might cost more up front investing in high quality solid wood floors or [engineered hardwood flooring](#) with a thicker wear layer, will give you a floor that lasts longer and will cost less to maintain over the time.

YOUR PREFERENCES, YOUR JOBSITE, YOUR INSTALLATION

Some people choose solid hardwood flooring or engineered wood flooring based on aesthetics. They want a wider board, or longer lengths. But the most critical factor to deciding between solid or engineered is the type of home you live in, where your home is located, and **your preferences** to the performance of your floor, from season to season. It can also depend on what type of installation you are performing, and who will be completing the installation.

Answering these questions will help you determine which type of flooring construction is right for you:

- Do you mind if your floors expand and contract between the seasons and gets small gaps during the drier months or do you prefer a floor with very little expansion and contraction?
- Will you live in your home year round or is it a seasonal home?
- What type of wood are you interested in - [hardwood floors](#) or [pine flooring](#)?

- Are you going for a more colonial, historic look or something more modern?
- What type of installation are you considering - at, above or below grade, concrete slab, radiant heat or plywood?
- Who will be doing the installation - will you do it yourself or hire a professional?