COCHRANE
FLOORS & MORE

The Truth about Hardwood

Manufacturing of Hardwood:

Properties:
Solid hardwood flooring is a 100% natural product that responds to air humidity variations. In order to avoid seasonal gapping from becoming noticeable and to reduce the amount of movement, relative indoor humidity level should be kept at 40-55% throughout the year. Engineered hardwood has minimal movement and maintains superb dimensional stability through seasonal humidity fluctuations. In order to avoid seasonal gapping from becoming noticeable and to reduce the amount of movement, relative indoor humidity level should be kept at 30-65% throughout the year. To learn more about the hardness (actual resistance to scratching & indenting, refer to the Janka scale of hardness on our website.

Dimensional stability:
Solid hardwood is a 100% natural product that responds to air humidity variations. During warm and humid summers, it is not unusual for wood to expand. During cold and dry winters, wood will most certainly contract. If room temperature and humidity levels are not kept in the optimum range, minor gapping or cupping may occur and even lead to more serious problems such as face checking. Because of the cross-layers of plywood and/or real wood used for middle and bottom layers, engineered hardwood flooring has enhanced internal balance and reduced possibility of twisting or warping. Seasonal movement is minimal, while dimensional stability through seasonal humidity and temperature fluctuations is superb. This is why engineered hardwood flooring is preferable over solid in interiors where fluctuations in humidity and temperature may be significant (cottages, basements, etc).

Price:
Some may assume that engineered hardwood is naturally cheaper than solid hardwood, but this is not always the case. Plank size, cost of lumber & production, as well as cost and quality of glues (used for adhering layers of engineered flooring) are often the cost determining factors here. Additionally, the cost of installation varies and depends on plank construction. For the most part costs are pretty much on par when comparing solid to engineered. Your selection of species and the quality or type of milling will have the biggest impact on cost.

Solid Hardwood:
Solid wood floors are one solid piece of wood that have tongue and groove sides. When we talk about solid wood floors, we tend to think of floors that are unfinished, but it's important to know that there are both unfinished (raw) and pre-finished 3/4" solid wood floors. And you should also be aware of the moisture factor. When you think solid – think expansive.

Solid wood floors are sensitive to moisture and because so, they are used in nail down and sometime nail AND glue down installations. These floors are also NOT recommended for installation below ground level, or directly over a concrete slab. The good news, these floors can be refinished, or recoated, several times, which adds to their appeal and to their long life in your home. In fact, there are solid floors that are over 100 years old that are still in good condition with rich patina and character – enhancing the beauty of the home.

Solid Hardwood (continued)**:**
Because they're a natural product, hardwood flooring will expand and contract in response to seasonal changes in moisture. In the winter heating months, moisture leaves the wood causing the floor to contract, which creates small gaps between each plank. In the summer months, when the humidity is higher, the wood will often expand and the gaps will disappear. If there is too much moisture it may cause the wood planks to cup, or buckle. Not something you want in your home. This is why it is important when installing a solid hardwood floor to acclimate the wood prior to installation and MAINTAIN THE HUMIDITY levels in your home. This will help assure a lasting, beautiful application.

Engineered wood floors:
Generally manufactured with 2, 3, or 5 thin sheets or plies of wood that are laminated together to form one plank. These wood piles are stacked on top of each other but in the opposite directions. This is called cross-ply construction which creates a wood floor that is dimensionally stable and less affected by moisture than a 3/4" solid wood floor. In the presence of moisture, solid wood planks will always expand across the width of the planks, rather than down the length of the boards. The advantage of cross-ply construction, is that it allows the plies to counteract each other which will stop the plank from growing or shrinking with the changes in humidity. The other advantage for you is versatility. You can install these floors over concrete slabs or on heated subfloors above, on or below grade (including your basement).

Most engineered floors can be nailed down, stapled down, glued down, or floated over a wide variety of subfloors, including some types of existing flooring. Engineered floors will range from 3/8" to 3/4" in thickness, and vary from 31/4" to 12" in width. The widths can also be mixed, such as 4-6-8-inch planks installed side by side. By varying the board widths you can change the total appearance of the floor. Create a truly custom look for your home. The lengths will be random and range from 14" – 72" in length. Often floors with lots of short pieces is indicative of a very inexpensive hardwood as these will be cut ends and throw-away planks that did not meet quality standards of a better mill. Always check on the range of length you should expect from your hardwood Manufacturer. For flexibility, engineered is top-notch. Because engineered wood floors are made up of several layers of wood the top finish layer can be a totally different wood species. A variety of domestic or exotic hardwood species are available such as Oak, Maple, Hickory, Acacia or Cherry.

Plank width:
Because solid hardwood is more sensitive to moisture and humidity fluctuations, the optimum plank width for solid wood flooring shouldn't generally exceed 4 ¼"-5", for our climate and depending on the finish type. In engineered hardwood, superb dimensional stability and resistance to humidity and temperature fluctuations allow for a much wider plank. Depending on construction type, some of our engineered flooring is manufactured up to 8" wide.

Manufacturing of Hardwood** (continued)**:

Professional Installation:
Solid hardwood should be installed on or above grade, using nail down or staple down installation method (depending on thickness and width). Engineered hardwood can be installed in a wide range of interiors, on, below or above grade. Depending on construction type, nail down, glue down, floating methods or even a combination of these may be used. "Floating" is a simple DIY procedure that requires no special training and thus significantly reduces installation costs (similar to laminate).

Eco- Friendliness:
100% wood, solid hardwood floors are a natural and eco-friendly flooring choice. In engineered hardwood flooring, glues and materials used for middle and bottom layers define whether the floor is non-toxic and eco-friendly. Engineered floors, in which middle and bottom layers are made of solid wood, and are bonded by high quality non-toxic glues, are equal in their eco-friendly characteristics to solid hardwood. Because the look and feel of solid vs engineered hardwood is virtually the same, the decision on which one to purchase and install should not be a matter personal preference, but rather a question of cost, climactic factors and other practical considerations