

History of Engineered Wooden Flooring

The beginnings of mass-produced wood flooring can be dated as far back as 1903, when an E. L. Roberts mail-order catalogue offered “wood carpeting.” This flooring consisted of 1½ x 5/16-inch wooden strips that were glued to heavy canvas that was then installed by tacking it down with brads. The wood was then sanded and finished. The varnishes used were usually slow-curing Tung oils from China. These were not durable in themselves, so the floors were hot-waxed and buffed to a shine with a floor brush.

Early examples of the “wood carpet” eventually evolved into more modern iterations, such as laminate flooring, which consists of melamine-infused paper as its upper layer, and wood-chip composite beneath. Laminate flooring typically features a printed or embossed top layer meant to approximate the look of real hardwood.

The current incarnation of engineered wood flooring has been available since the 1960s, and has steadily increased in quality, leading to improved advantages over traditional hardwood flooring.

Structure of Engineered Wooden Flooring

Engineered wood flooring is most commonly made with a plywood-core substrate and a real hardwood veneer or skin, which comes pre-finished from the factory. The top veneer, which looks just like the top of a traditional solid wood plank, is called the lamella.

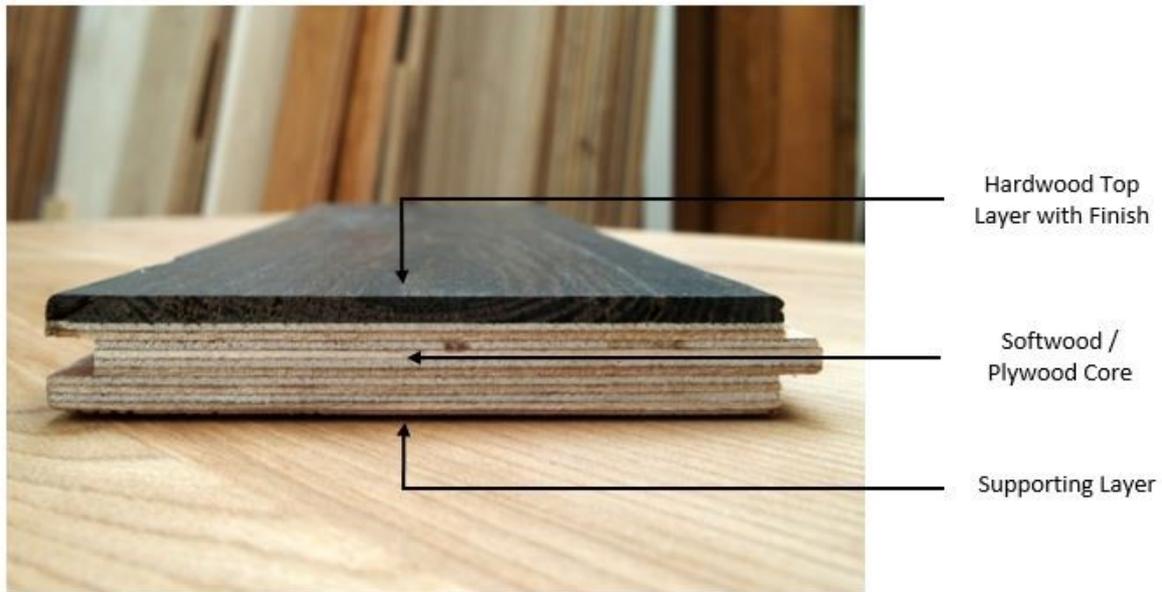
Some engineered flooring utilizes a finger-core construction, with a substrate comprised of small pieces of milled timber running perpendicular to the lamella. This can be made with an additional layer of plywood running parallel to the lamella, which gives it added stability. Fibreboard-core flooring is also available, but it's generally considered to be an inferior option.

Engineered wood flooring is meant to be indistinguishable from traditional hardwood floor once it's installed, and only the lamella is visible. The lamella veneers available are made from nearly every type of common wood, as well as many more exotic ones, in order to provide the same variety of aesthetics typical of quality hardwood floors. The substrate that the veneer is attached to is just as strong and durable as hardwood -- **if not stronger** -- and the finish applied at the factory often outlasts one applied on-site to solid wood flooring. Even surface effects are available that can be applied to the finish to give the flooring a time-worn look, such as light distressing.

Hardwood Top Layer – This layer is made of solid wood and gives you the look and feel of a real solid floor. The wear layer also comes in different widths, anything from 2mm to 6mm. This top layer also has a finish which can range between oil and lacquer.

Softwood or Plywood Core – The core area helps the flooring retain its shape and stability. A variety of materials such as plywood, softwood or High Density Fibreboard can be used for the mid core section.

Supporting Layer – This layer is key to providing stability to the board, giving a strong foundation for the flooring.



Pro's and Con's when choosing Engineered Wooden Flooring

Cost

Con - Hardwood flooring is made of harvested trees, pricing depends on how exotic the trees are. In general, hardwood is considerably higher to buy and to install.

Durability

Pro - Hardwood is the real deal, it is gorgeous and depending on the type of wood, can add considerable value to your home.

Con - Hardwood is susceptible to scratching, can get damaged from excessive moisture and will show wear, especially in heavily trafficked areas.

Repair

Pro - Hardwood can be repaired by sanding imperfections and refinishing. This gives it the edge over laminate, in that it will last for years.

Advantages of Engineered Flooring

While solid hardwood is a great traditional building material that provides aesthetically pleasing and structurally sound flooring, it does have its limitations. For example, it cannot be installed directly on concrete or below grade, such as in basements. It is generally limited in plank width and is more prone to gapping, which is excessive space between planks, and cupping, which is a concave or "dished" appearance of the plank, with the height of the plank along its longer edges being higher than the centre with increased plank size. Solid hardwood also cannot be used where radiant-floor heating is in place.

Engineered wood flooring, on the other hand, can actually provide some distinct advantages over traditional hardwood in many instances and applications. Some of these include:

- Lamella veneer is available in dozens of wood species.
- Surface effects can be applied to further enhance its appearance.
- The factory finish can outlast site-applied finish on solid hardwoods.
- Drying time for the finish is eliminated because it's pre-applied at the factory.
- It can be used in basements and over concrete slabs.
- Installation is quick and easy.
- It can be used over radiant-heat systems.
- It can be refinished to repair normal wear and tear.
- The core layer can expand and contract more freely without warping.
- The flooring can be removed and re-installed elsewhere, if desired.

Engineered wood flooring is increasingly the first choice for floor installations, and its advantages, in many circumstances, can be exceptional. Homeowners with a little DIY experience can usually install it themselves. Inspectors are likely to encounter it in new builds as well as remodels even more frequently as it continues to gain in popularity every year.

Life Cycle and Engineered Wooden Flooring Warranties

How long an engineered wooden floor will last will be determined by the quality of the manufacturing process and the thickness and durability of the wear layer. Most engineered wood flooring is designed to last a life span of between 20 and 30 years. This number coincides with the replacement period of most other aspects of a home such as the roof and certain appliances. The manufacturer of the engineered wood flooring can provide more detailed information relative to the life span of their brand of engineered wood flooring. Different manufacturers will provide different life span information for the flooring that they produce and sell to the public.

Factors Affecting Life Span

There are factors that will go into determining the amount of time your engineered wood flooring should last. These factors include the amount of wear and tear that the flooring should expect to experience over the course of a specific period of time. For example, engineered wood flooring that is installed in high traffic areas of the home will last a shorter duration than engineered wood flooring that is located in less travelled or used rooms. The lower the amount of traffic the higher the life expectancy of the flooring.