



The
**SOLID
WOOD**
Flooring Company

The Solid Wood Flooring Company
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We can source any type of flooring to order including exotic timbers and different hand finishes

Engineered Wooden Flooring comes in a large range of finishes and styles. It also comes in different structures and it is important to understand the implications of how the boards are manufactured to appreciate the effect they can have on the application you want to use the flooring for. Finishes can range from **antique** hand distressed to tranquil **natural brushed boards** all through to rustic and prime finishes and can be used with underfloor heating. You should never confuse Engineered wood flooring with the cheap limited versions.

There are three basic structures of engineered floors

- Cross ply birch plywood back
- Sandwich Board where the whole structure is made up of the same species of tree
- Poplar back where you normally get just two layer of poplar this is the cheapest engineered board and is probably the worst to use except in very limited applications

Top quality plywood boards are the foundation for any quality engineered flooring. The plywood is made up of several layers of birch; each layer has the grain running in opposite directions which will ensure that the top layer has a very hard surface on which to adhere. You should always look for 100% birch plywood back to give extra stability. A mixture of woods is not good for the long term stability of any **engineered wooden floor**.

Solid Wood and Engineered boards

The difference between a solid wood floor board and a good quality engineered floor board that has a minimum top layer thickness of 5mm or 6mm is minimal. Solid boards are normally 18mm thick and good quality engineered wood flooring is 20 to 21mm thick.



The picture of actual boards opposite shows the end section of a solid board next to an engineered board and as can be seen there is no real difference between either.

Therefore engineered boards offer huge advantages over solid wood flooring due to their stability and they will look the same as a solid board.

The picture below shows the end grain of a modern solid oak where the heartwood is near the middle and the board will always "cup" towards the heartwood, this will not happen with an engineered board.



Diamond
Range

Amethyst
Range

Ruby
Range

Sapphire
Range



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How are engineered floor boards made.

Engineered wood floors are made up of a top layer bonded with modern adhesive to a plywood base. Like any structure, the foundation, which in this case is the plywood, is the part that gives the floor board its stability. Plywood is made from veneers (which are slices of hardwood) about 2mm thick which are bonded together in high pressure presses. The best engineered boards have a 14mm or 15mm thick plywood back. The top of **hardwood flooring** is then bonded to the plywood base with a high pressure press and allowed to cure. Once this is done and the adhesive is cured the boards are then put in a drying chamber (similar to a kiln) to balance the moisture content of each type of wood.



The top veneer or top wood layer of solid hardwood can be anything from 4mm, 5mm or 6mm. If the top layer is only 2mm then it can get easily damaged and unlike thicker top layers it is harder to repair.

Top quality engineered floors will look no different than solid wood but are in fact much more stable and do not need to be acclimatised except for the sandwich board.

By choosing an engineered wood flooring board you are helping the Environment

There are many reasons to choose an engineered wooden floor over any other type including solid wood, some are listed below and with issues of global warming and other concerns about our environment we should be looking at buying such a natural flooring solution.

- We can manufacture much more flooring from the same tree using engineered wooden flooring. Solid boards are normally 18mm to 20mm thick and with a 6mm top layer we can get three times as much and with a 4mm top layer, four times as much engineered wood flooring.
- Engineered floors will not expand and contract like solid wood
- You do not need to acclimatise the boards
- You can use engineered boards with underfloor heating
- Engineered flooring can be floated on uneven surfaces or better still glued down
- Engineered wooden flooring can be used in moisture prone areas of homes and commercial premises, like bathrooms, kitchens, walkways etc.



Cross section of an engineered board
20mm thick with a solid 5mm top layer
and a multiply birch plywood back

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Installing Engineered Flooring

There are several methods of fitting engineered floors and the main ones are below

- Floating Floor this is where you glue the tongue and grooves together with a good quality PVA adhesive and just let the boards rest on an underlay or electric heating mat if it is recommended by the manufacturer.
- Gluing the floor directly to a concrete screed or flat subfloor like plywood or chipboard
- Secret nailing or screws directly to a plywood subfloor or directly to joists

Cheap Poplar backed Engineered Flooring

This should only be used in certain situations where there is no high traffic and is only really for residential situations.



The picture opposite shows the profile of a click system board that uses a poplar middle and a thin birch back. These are stable boards but the top layer cannot be thicker than 4mm and the poplar back is more susceptible to moisture than birch.

Engineered Sandwich Floor Board Construction

These are fairly new to the market and are normally used where boards are wider than 220mm to 260mm. For example the picture below shows a 340mm wide board that is constructed totally of Oak. This means that the whole board has the same cell structure and is the same species allowing consistent movement which is only restricted by the structure. If you had a solid board like this that is cross cut, as all floor boards are these days, then you would have to drill holes. This means you would screw the boards directly from the top as there would be too much movement which would result in expansion, contraction, warping and cupping. This is why you see plug holes in very old boards.



In a sandwich constructed board, picture opposite, the top layer is 6mm, the middle with the grain going in the opposite direction is 9mm and the bottom layer is 5mm and is also finger jointed.



The top picture is a slice of the 20mm thick sandwich board. This shows how the grain runs in the opposite direction. The lower picture shows the strips of the middle layer, 6mm top layer and 5mm bottom layer.

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