

wide-plank wood floors

A non-engineered solid-wood floor holds a sentimental attraction for all of us: it is, after all, the grandfather of wood flooring. However, if you want exceptional wide-plank wood flooring with the most up-to-date technology and performance characteristics, engineered wood is by far the superior choice.

The changing seasons, combined with modern heating and air-conditioning systems, subject our interior environments to extreme changes in temperature and humidity. Non-engineered (solid) wide-plank wood floors react badly to such variations, gapping, cupping and warping: such ill effects are usually visible within one or two years of installation. To avoid such problems, wood must be uncompromisingly engineered. To do this correctly, an intimate understanding of wood and its properties is essential.

Wood and it's properties

Everyone knows that wood is derived from living trees. What people often fail to consider, however, is that wood is also substantially composed of water. This has some important consequences: principally, that it will expand and contract when subjected to environmental changes in temperature and humidity. Unequal stresses within sawn timber will cause otherwise flat planks to expand, contract and exhibit curved distortion.

The degree to which wood planks move once they have been installed is entirely determined by the type and construction of the planks. Only correctly engineered wide-plank wood floors can offer complete stability. As with any product, the premium brands perform better, last longer and offer the most valuable guarantees. Never has an Element7 customer had to call on our 25-year guarantee.

Non-engineered solid wood

Naturally enough, many people are attracted by the idea of having a non-engineered (solid) wood floor. The difficulties consequent upon such a choice are myriad, however. Setting aside the fact that solid wood planks are normally only available in widths of up to 150mm, compared to 350mm for engineered wood, there is the problem of stability. Non-engineered (solid) wide-plank wood floors will inevitably continue to expand and contract after installation. Decreases in humidity in the exposed wear surface can cause cupping (concave curving) as the surface layer dries out. Gaps will appear between the planks as each whole plank dries and shrinks. Sanding can help to rectify cupping, but itself gives rise to crowning (convex curving) as equilibrium is restored. Increases in moisture content may generate excessive compressive forces around the floor's perimeter, perhaps even causing the floor to lift in the most stressed areas. There is no doubt that the dimensional stability of a premium-engineered wood floor provides a far superior solution for a wide-plank wood floor.

Engineered wood

Engineered wood now accounts for more than 70 per cent of the European wood-flooring market, dominating commissions at the high end – a sound testimony to its superior qualities. The reason for this is simple: engineered wood is much more stable. The construction of a properly engineered wood plank serves to counteract the forces that make wood expand and contract across the direction of the grain. A well-engineered wide-plank should consist of a sandwich-like construction of three layers. The core, or inner, layer should be softwood (not plywood), and its grain should run at right angles to the two outer layers. Softwood can withstand considerable bending and distortional forces along its grain and resist any dimensional tendency of the outer layers to change as a result of fluctuations in temperature or humidity. The dimensional stability of correctly engineered premium wood flooring can allow it, for example, to be confidently installed over underfloor-heating systems.

Element7's premium-engineered planks are far more expensive than either non-engineered (solid) wood planks or lower-quality engineered variants. There is a good reason for this: aesthetic superiority aside, they are technically superior and therefore far more stable. There are obvious indicators to help you recognise inferior-quality boards: e.g., unbalanced ply-backed veneers, planks of two- rather than three-layer construction; top and bottom layers of different wood species; variations in the density of the core material; poorly bonded layers; inadequate quality control in the precision-machining. Such faults inevitably compromise the performance of engineered wood with respect to its most important attribute: stability.

The ultimate premium-engineered wood

Element7 is renowned throughout the world for the uncompromising engineering standards of its wide-plank flooring range. Part of the secret of Element7's superior engineering is our refusal to cut corners at any stage in the manufacturing process. Attention to detail is crucial. For instance, it is essential that the softwood plank cores are formed from blocks with alternating and opposing grains. This is a painstaking process, but it is essential to guarantee resistance to any possible warping effects. The two outer layers are no less important. A typical money-saving measure employed by some manufacturers involves using an inferior timber for the bottom layer of the sandwich-like board in the mistaken belief that, since it is not visible to the eye, a low-grade material will suffice. Nothing could be further from the truth. The top and bottom layers of the engineered flooring must be of the same wood species and in identical dimensions: crucially, having the same expansion and contraction characteristics allows any stress or strain forces to be cancelled out through the core layer. An Element7 plank always deploys exactly the same wood species, in exactly the same dimensions, on top and bottom, thereby guaranteeing outstanding structural integrity and strength. Element7 is regarded as setting the world standard in engineered wood floors. The wood-engineering technique used in the construction of an Element7 wide plank is second to none and is internationally recognised as the industry benchmark. With Element7, your investment is guaranteed to deliver the full glory of a wide-plank wood floor with none of the attendant problems.