WOODlife
hardwood flooring

essentials in the manufacturing process

Dear Sir/Madam,

WOODlife is a trademark of UAB NEDlit International (in short: NEDlit). NEDlit is a Lithuanian company and was established in 1993. The company is lead by two Dutch owners who have a background in international sustainable forestry & timber processing. NEDlit's core activity is the production of high quality, wide width, long length, two-layer, one-strip engineered floorboards. Next to our factory in Lithuania, we have joint ventures with a range of quality mills throughout Europe and keep a large stock with additional flooring products. In this way we can be of best service to our clients and are able to offer almost everything.

FSC
www.fsc.org
FSC® C015106
The mark of responsible forestry

Two-layer engineered floorboards
Our two-layer European oak, ash and Dutch elm engineered floorboards have a single-strip top layer of 4 or 6 mm, glued on top of a base of 12 or 15 mm first quality cross-layer water resistant Siberian birch plywood. With a total thickness of 16 or 21 mm, the sensibility of our floorboards to changes in moist and temperature are reduced to the very minimum. Combined with a thick top layer, these floorboards are meant to last a lifetime.

A-quality flooring: essentials in the manufacturing process
WOODlife Flooring stands for A-quality engineered flooring. Due to our true passion for wood as a natural product, we have a very critical attitude in how our raw material is to be handled before and during the manufacturing process.

This document explains the essentials in what makes a WOODlife floor a top quality product.
For an elaborate product specification of our engineered flooring we refer to our Product Declaration, which can be viewed at our download section on our website.

We hope you might be interested in our product range and are always on the look-out for long lasting partnerships.

With kind regards,

WOODlife Flooring

1 Raw material

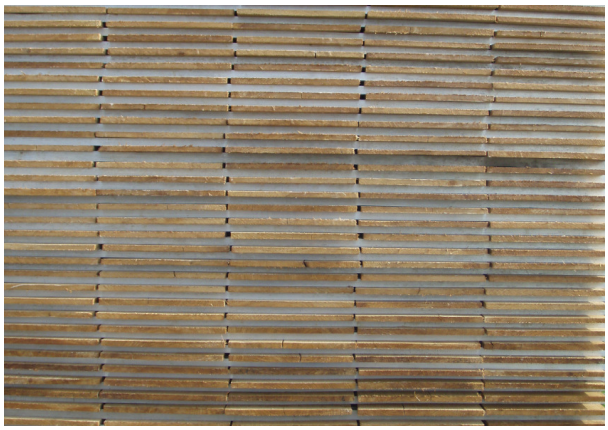
Origin

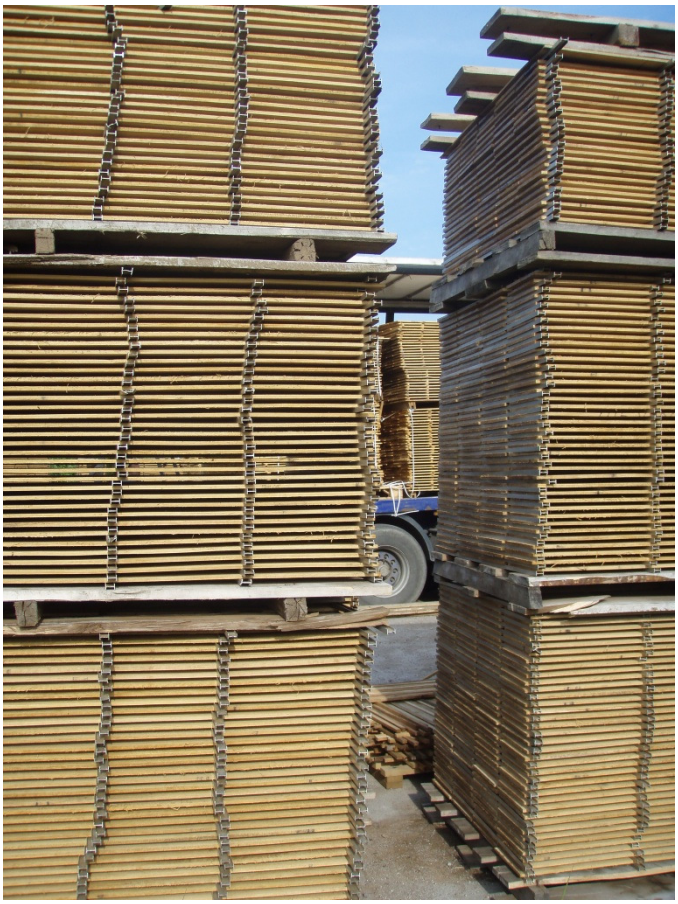
Our oak and ash raw materials mainly originate from Ukrainian and Baltic forests. Especially Ukrainian oak is known for its slow grown character and therefore shows a very stable behavior when it's being dried. As a result of the climate and forest management (subtle thinning), the arrangement of the annual rings is very steady. Consequently, tension inside the logs in reduced to a minimum, with low risk of (hardly visible) ring shakes in the raw material and flakes/peels in the final product, which sometimes manifests itself after installation of a floor.

Producing lamellas

The majority of colleague producers of engineered flooring use lamellas (top layers) by splitting inch KD boards on thin cutting frame or band saws such as Wintersteiger. Kiln drying inch boards by definition leads to tension within the KD boards (hair cracks) and stronger colour changes due to the forced extraction of acid tannin. Many hair cracks can hardly be seen by the human eye. In situations where the installed floorboards face low humidity circumstances (e.g. harsh winter seasons, underfloor heating) these hair cracks can easily lead to larger cracks. The stronger colour changes on the other hand are undesirable in higher grades (Nature, Select, Prime). Splitting KD boards is generally regarded as the most economical way of producing lamellas due to low waste percentages and short lead times. Short lead times enables producers to keep their stock on low levels.

WOODlife on the other hand cuts its lamellas straight from fresh cut logs. For our 6^{+} mm lamellas on our 21 mm final product for example, we cut fresh lamellas of app. 9-10 mm, after which the head ends are dipped in wax to prevent end cracks. The fresh cut and maxed lamellas are individually being put on aluminum stickers (no sticker marks) after which they are kiln dried according to a moderate drying schedule. The KD lamellas are nearly free of tension and have kept their original, natural colour changes.





2 Calibrating & glueing lamellas

The conventional method

After splitting lamellas from KD boards, the majority of colleague producers calibrate their KD lamellas to a certain width after which they are directly glued to the plywood bottom layer. The KD lamellas in this method however, have a fine sawn surface and are often twisted and bent due to the tension in the KD board that is released during the splitting process. When gluing and pressing these lamellas, hollow spaces can occur between the top and bottom layer. These hollow spaces are the main reason for delamination.

The WOODlife method

WOODlife's KD lamellas are both calibrated to width and thickness before glueing and pressing them onto the plywood. The calibration to thickness is performed by pressing the lamellas down and calibrate them on both sides by a rotating planing machine which is especially developed for this purpose. The result is a very even and straight lamella, free of any tensions with an optimized, even surface which forms a perfect surface for the glue to fasten to. Next to that, the sorting out of the lamellas is made a lot easier because all the defects are clearly visible. The initially 9-10 mm fresh cut lamella is now calibrated back to 7.0 mm.

3 Preparation of the plywood

Although Russian or Eastern European birch plywood meets a certain moisture content on paper; in practice the moisture content is simply too high. Main reason for this is that moisture from the glue that is used does not have a chance to evaporate from the outer wood layers, because the sheets are immediately stacked packed after production.

The conventional method

Due to high labour cost and sometimes due to a lack of understanding, many producers cut the plywood sheets into strips and immediately glue and press them to the top layer. This often leads to curved boards.

The WOODlife method

Our Russian birch plywood is always stacked on stickers and acclimatized for a few days in our kilns. This way the tension within the plywood is fairly reduced, which leads to less risk on curving of the finished product.

Furthermore our plywood is preselected to thickness at the manufacturers' site. This means that the deviation in thickness in our plywood always floats between 14.2 to 15.0 mm, and never above 15 mm. As a result, the thickness of our top layer on our finished product of 21 mm is always between 6.0 and 6.8 mm! Due to this thick wear layer, our flooring is truly meant to last a lifetime.

4 Summary

Conventional method	WOODlife's method
Lamellas are split from KD inch boards at 5.7 to 6.0 mm	Lamellas are freshly cut straight from the log at 9 to 10 mm, dipped in wax, put on aluminum stickers and dried at a moderate rate
Lamellas are only calibrated to width	Lamellas are calibrated to thickness at 7.0 mm (planed on two sides) and width
Result: lamella with tension, a rough, uneven surface, hair cracks, and enlargement of colour differences, sticker marks possible	Result: straight lamellas free of tension, no hair cracks, preservation of natural colour differences, no sticker marks
Glueing of the rough and bent surface to plywood leads to risk of delamination	Perfect bonding of the lamella to the plywood: no delamination, guaranteed!
Plywood processed and glued straight away	Plywood put on stickers and acclimatized in our own drying kilns
Top layer on the final product of 4.8-5.5 mm	Top layer on the final product of 6.0-6.8 mm

The features mentioned in this document are essentials in the manufacturing process only.
If you are interested in additional details of our manufacturing process or more elaborated info of our materials and products used, please feel free to contact us anytime.

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Your business partner in top-quality flooring