

European Beech



European Beech ... the wood for all reasons!

Known by its Latin name, *Fagus sylvatica*, European Beech is renowned for its versatility, durability, and machinability. Populating nearly 14% of Germany's 11 million hectares of forest land, European Beech is one of the most popular hardwood species.

The climate, terrain and soil of Germany are ideally suited for European Beech. These optimal growing conditions afford German hardwood lumber producers ready access to a high quality and sustainably managed forest resource. With its fine texture, uniform color, excellent machinability and wide range of finishing possibilities, it is easy to understand why architects specify European Beech from Germany for their projects.

Certified forest management

Long before the term was coined, the German Foresters had well established programs for Sustainable Forest Management. Germany's forest have been under these sound management practices for over 200 years, and it was because of this long history of proven success that they were readily certified by PEFC. Although not as widely recognized, there are a number of forests within the region that are also certified under FSC.



Redefining quality

To maximize the yields of quality hardwood lumber from this valuable natural resource, German hardwood lumber producers take pride in integrating hundreds of years of experience with the latest technology to deliver the highest quality hardwood lumber to their customers through out the world.

Export experience

Many years of experience in exporting beech lumber to countries around the world made the German hardwood industry a dependable business partner.

Graded to international standards

Highly productive sawmills with state of the art steaming and kiln drying facilities supply the markets with products graded to internationally recognized standards (NHLA and E.O.S.).



European Beech ... endless possibilities

Its fine texture and uniform color lends European Beech to a wide range of applications that call for elegance as well

as strength and durability.

Given Red Oak's lack of versatility and the prohibitive cost of such woods as Hard Maple, European Beech offers a fresh new look. As consumers continue to embrace the importance of sustainable natural resource management, architects, designers and manufacturers will continue to seek reliable environmentally friendly alternatives to the once exploited tropical hardwoods and endangered species. European Beech easily fills this demanding role.

European Beech is recognized as one of the most important European hardwood species and is consistently ranked #1 in export because of its ...

- Excellent physical properties;
- Light colored appearance suitable for a wide range of stains and finishes;
- Environmentally Sustainable Resource Management Practices, ensuring continues, ready availability to meet the needs of a demanding marketplace.

Technical values

When compared to other hardwoods, the advantages of European Beech become readily apparent:

	Specific Gravity	MOE	Compression	Hardness	Shear	MOR	Shrinkage		
							Radial	Tangential	Volumetric
European Beech	0,68	1,82	8122	1438	2320	17144	5,8	11,8	17,7
Cherry	0,50	1,49	7110	950	1700	12300	3,7	7,1	11,5
Hard Maple	0,63	1,83	7830	1450	2330	15800	4,8	9,9	14,7
Northern Red Oak	0,63	1,82	6760	1290	1780	14300	4,0	8,6	13,7
Black Walnut	0,55	1,68	7580	1010	1370	14600	5,5	7,8	12,8

Large differences in working properties do not generally occur among groups or classificationen of woods. The categorie provide a relative basics of comparison. For all wood species, many wood properties vary by geographical region and local conditions. Since wood is a natural product, some properties and characteristic can vary.

Working Characteristics

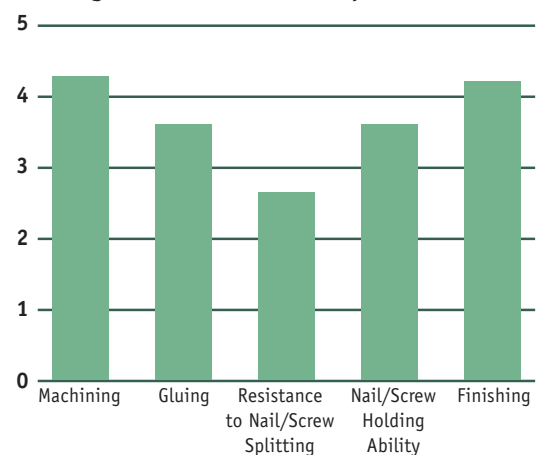
When choosing a hardwood, manufacturers seek a species that machines easily, will not split or crack in production, and can be easily finished in a wide variety of stains and finishes. European Beech has been heralded in markets around the world for its excellent working characteristics.

The table on the right illustrates just how functional European Beech is for machi-

ning, gluing, resistance to nail/screw splitting, nail/screw holding and finishing. On a scale of one to five (five being best), European Beech consistently receives high marks in all vital areas of hardwood working qualities.

European Beech easily adds beauty and value to your design while simplifying your manufacturing process.

Working Characteristics of European Beech



European Beech



Unedged Lumber Boules

Tradition

“Blockware” or “Blochware” is the centuries old method of producing high value European Beech lumber for the local craftsmen. Before the introduction of automated furniture plants and mass production, German craftsmen produced quality furniture, cabinetry and flooring from lumber produced by this method. Much like a fine suit made cut from the same bolt of fabric, to insure maximum uniformity in color and grain, a craftsman would create an entire kitchen from the lumber of a single log sawn in this traditional method. Today there are still craftsmen in Germany that create masterpieces in Beech using this time honoured method.

European rules

The rules for visual quality grading of unedged beech lumber have been standardized under the direction of the European Organization for the Sawmill Industry (EOS). Today this is the standard in grading of European unedged beech lumber.



Grading rules for unedged sawn Beech lumber

Quality	A - Quality
Length	≥ 2,10 m
Minimum cover width (measured half-wane)	≤ 32 mm ≥ 100 mm > 32 mm ≥ 120 mm
Sound knots	80% of the pieces free on both sides. 20% of the pieces a small knot (max. 10% of the width) allowed per piece of 2,10m.
Dead knots, unsound knots	not allowed
Slope of grain	fairly straight slope of grain
Curly grain	not allowed
Inbark	90% of the pieces free on both sides, 10% of the pieces allowed, when compensated in size
Rot	not allowed
Discolourations	not allowed
Red heart	80% of the pieces free on both sides. Allowed at 20% of the pieces on the back up to 10% of the width.
Curvature	up to 2 cm per running meter
Cracks, fissures	straight cracks up to 20% of the length permitted



Red Heart

A unique characteristic of European Beech is a tendency in older trees to produce heartwood that is readily distinguishable by its deep reddish color.

The fact that the structure of this red heart varies from tree to tree, produces unique and varied patterns in each board sawn from logs sawn of these selected trees.

This unique characteristic has not escaped the eye or imagination of European Designers. Today many unique pieces of furniture, cabinetry as well as flooring are being designed and manufactured to capture the beauty of this truly unique feature of European Beech.

B - Quality

≥ 2,10 m

≤ 32 mm ≥ 100 mm

> 32 mm ≥ 120 mm

Isolated small knots (max. 15% of width) allowed on both sides and 1 big knot (> 70 mm) per running meter when compensated for in size.

1 knot up to 70 mm allowed per running meter, when compensated for in size.

light slope of grain allowed

allowed

allowed, when compensated for in size

allowed if isolated and when compensated for in size

allowed if isolated and when compensated for in size

allowed up to 10% on the upper face

up to 5 cm per running meter

Straight cracks up to 30% of the length permitted. Unstraight cracks permitted if compensated for in size.

C - Quality

90% ≥ 2,10 m

10% ≥ 1,80 m

≤ 32 mm ≥ 100 mm

> 32 mm ≥ 120 mm

allowed

allowed

allowed

allowed when compensated for in size

allowed when compensated for in size

allowed when compensated for in size

Allowed on both sides if white on at least 12 cm next to the heart.

allowed

Straight and unstraight cracks up to 40% of the length permitted.



Unedged Beech Lumber

A - Quality

F = Face
R = Reverse side



SI units

Length	≥ 2,10 m
Width	≤ 32 mm thick ≥ 100 mm
	> 32 mm thick ≥ 120 mm

US/UK units

Length	≥ 7'
Width	≤ 5/4" thick ≥ 4"
	> 5/4" thick ≥ 5"

Grading in accordance with E.O.S

Unedged Beech Lumber

B - Quality



SI units	
Length	≥ 2,10 m
Width	≤ 32 mm thick ≥ 100 mm
	> 32 mm thick ≥ 120 mm

US/UK units	
Length	≥ 7'
Width	≤ 5/4" thick ≥ 4"
	> 5/4" thick ≥ 5"

Grading in accordance with E.O.S



Unedged Beech Lumber

C - Quality

F = Face
R = Reverse side



SI units

Length	90 % $\geq 2,10$ m
	10 % $\geq 1,80$ m
Width	≤ 32 mm thick ≥ 100 mm
	> 32 mm thick ≥ 120 mm

US/UK units

Length	90 % $\geq 7'$
	10 % $\geq 6'$
Width	$\leq 5/4''$ thick $\geq 4''$
	$> 5/4''$ thick $\geq 5''$
Grading	in accordance with E.O.S

Unedged Beech Lumber

Red Heart



Quality grades similar to C, however, allow red heart



European Beech

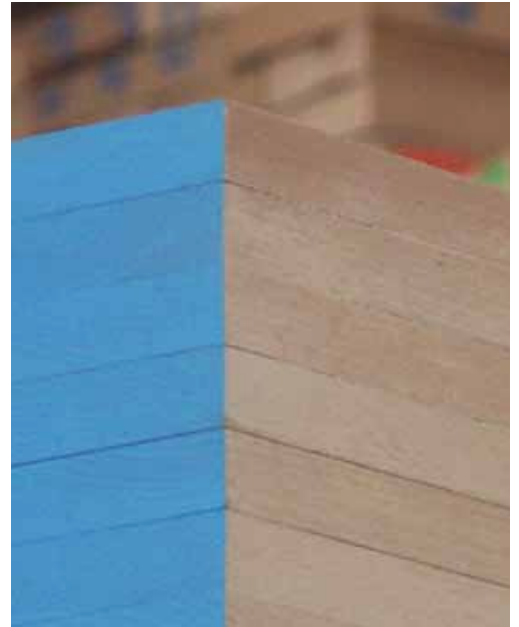


Square Edged Lumber

In the last few years German Hardwood lumber producers recognize the importance of well manufactured lumber produced to internationally accepted standards fully.

For this reason, German mills offer square edged European Beech lumber manufactured and graded in accordance with the National Hardwood Lumber Association (NHLA) Grading Standards.

In adopting these standards for their square edged lumber, the German Beech lumber producers apply the latest technology and manufacturing processes to ensure that their lumber is cut full to thickness, properly kiln dried to 6-8%, then full equalized and conditioned. Lumber is graded after KD in accordance with the NHLA Rules of Standard Inspection, and then exported to the need of the world market.



Application examples





Square edged european beech lumber is available in the following grades:

FAS

The top quality - best quality on both sides meeting highest requirements. For use where Beech is finished with clear stain or is to be French-polished in a light color and both sides are visible: for solid wood furniture parts, for furniture fronts, solid wood panels, moldings, stairs, etc.

FAS 1F

One side top quality – for furniture, furniture fronts, solid wood panels, moldings, stair treads, solid wood floors, table tops.

No. 1 COM

High yield for medium and longer lengths: ideal for furniture parts, solid wood panels, parquet flooring, rustic floorboards, stair treads.

No. 2 COM

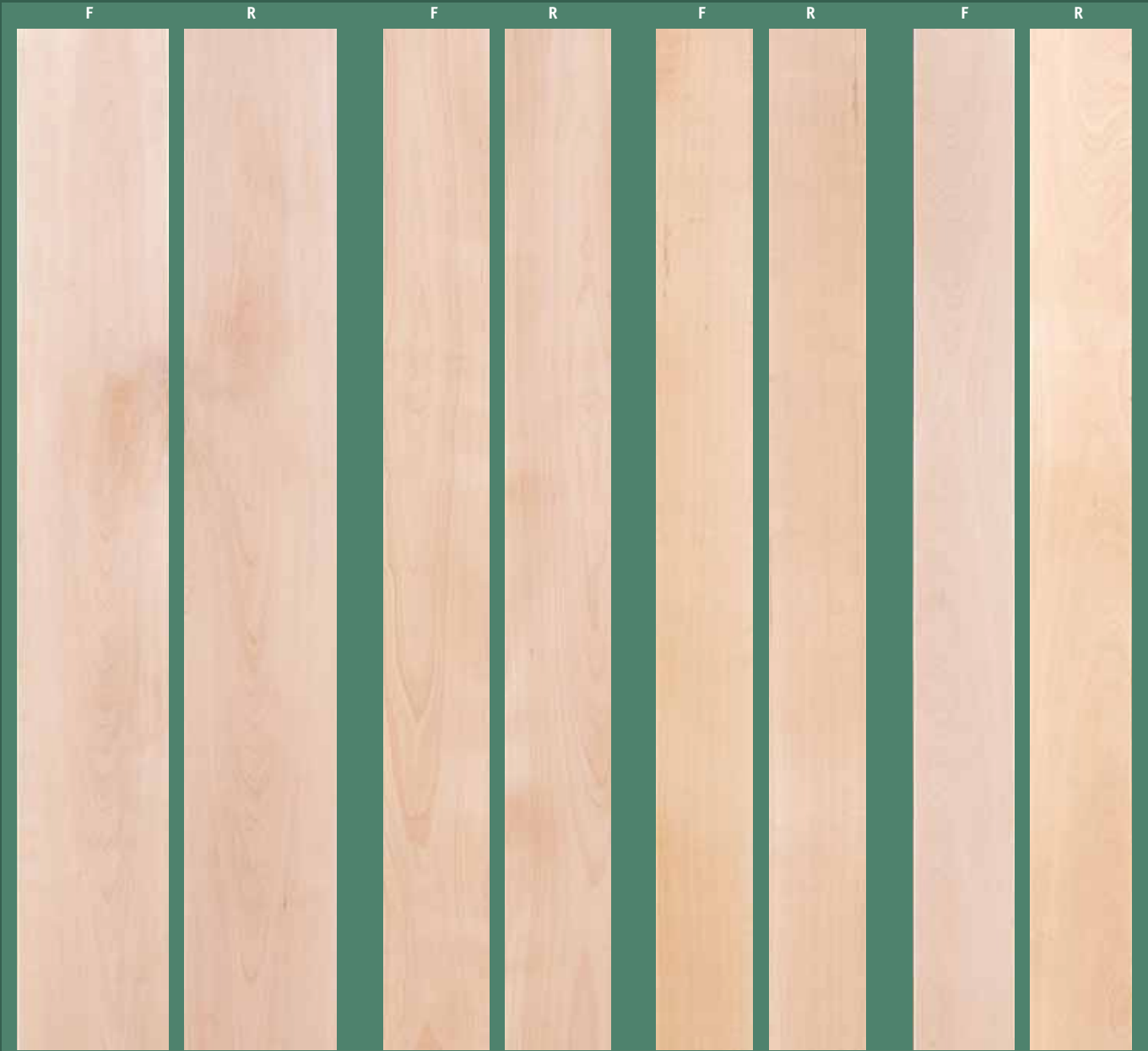
Rustic appearance, good, medium quality. Ideal for applications where short lengths are needed or where cuttings with fingerjointing are used, e.g., parquet, solid wood panels.



Square Edged Beech Lumber

FAS

F = Face
R = Reverse side



SI units

Length $\geq 2,45$ m
Width ≥ 150 mm

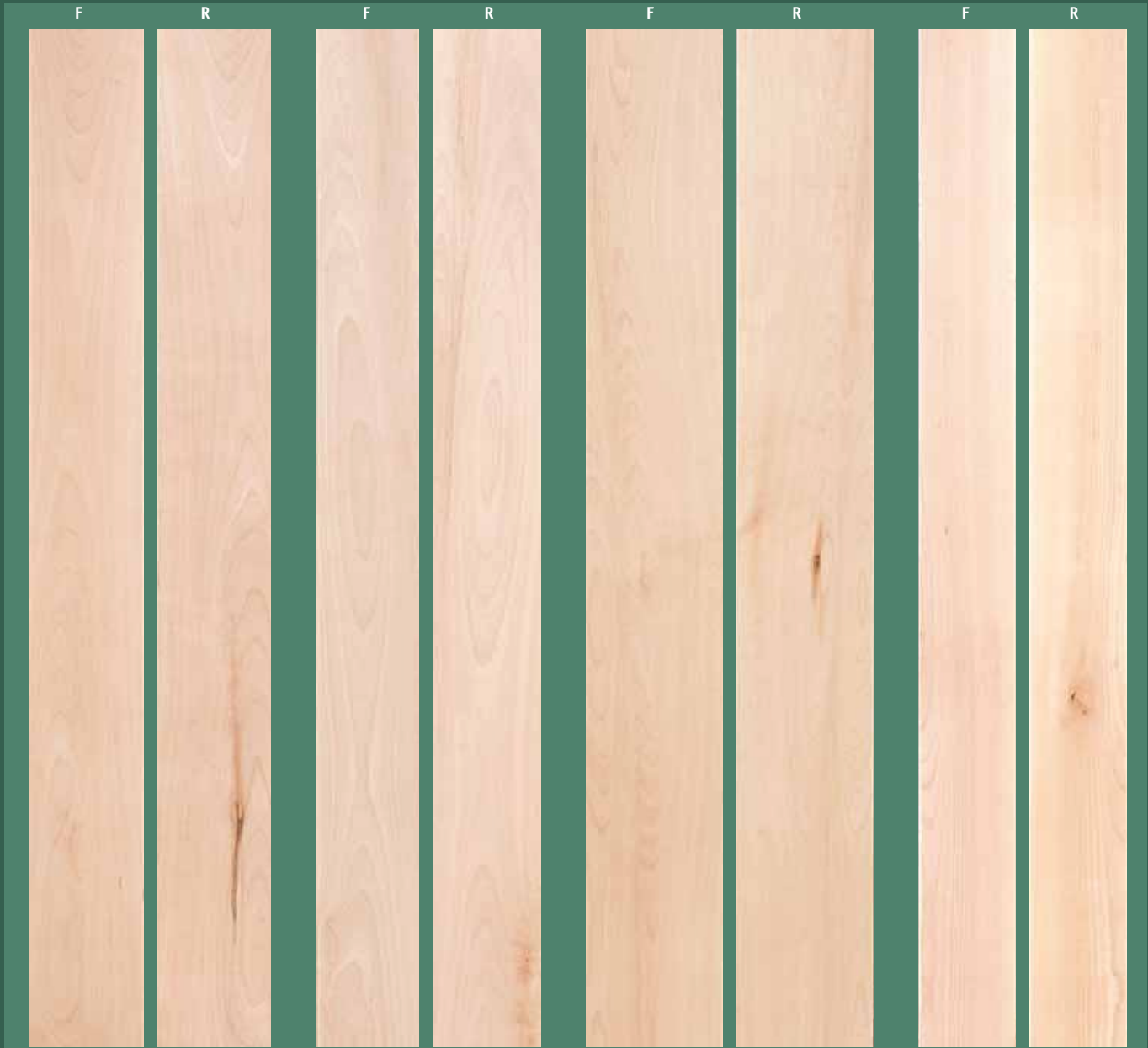
US/UK units

Length $\geq 8'$
Width $\geq 6''$

Grading in accordance with NHLA
Yield $\geq 83,33$ %

Square Edged Beech Lumber

FAS/ 1F



SI units

Length $\geq 2,45$ m
Width ≥ 150 mm

US/UK units

Length $\geq 8'$
Width $\geq 6''$

Grading in accordance with NHLA
Yield $\geq 83,33\%$



Square Edged Beech Lumber

No. 1 COM

F = Face
R = Reverse side



SI units

Length $\geq 1,85$ m
Width ≥ 80 mm

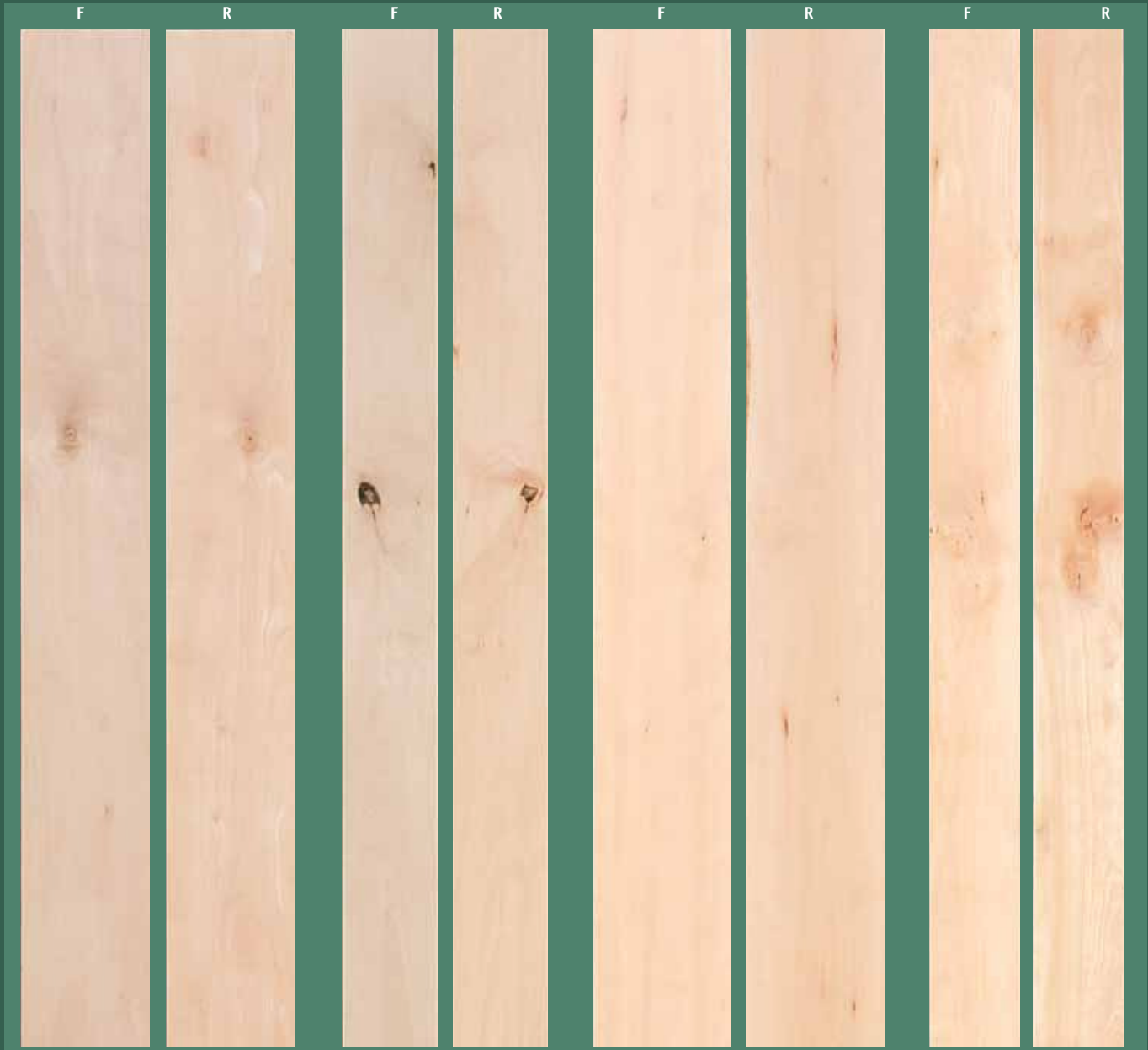
US/UK units

Length $\geq 6'$
Width $\geq 3''$

Grading in accordance with NHLA
Yield $\geq 66,66\%$

Square Edged Beech Lumber

No. 2 COM



SI units

Length $\geq 1,85$ m
Width ≥ 80 mm

US/UK units

Length $\geq 6'$
Width $\geq 3''$

Grading in accordance with NHLA
Yield $\geq 50\%$

