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 throughout 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 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;

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

<table>
<thead>
<tr>
<th>Specific Gravity</th>
<th>MOE</th>
<th>Compression</th>
<th>Hardness</th>
<th>Shear</th>
<th>MOR</th>
<th>Radial</th>
<th>Tangential</th>
<th>Volumetric</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Beech</td>
<td>0.68</td>
<td>1,82</td>
<td>8122</td>
<td>1438</td>
<td>2320</td>
<td>17144</td>
<td>5.8</td>
<td>11.8</td>
</tr>
<tr>
<td>Cherry</td>
<td>0.50</td>
<td>1.49</td>
<td>7110</td>
<td>950</td>
<td>1700</td>
<td>12300</td>
<td>3.7</td>
<td>7.1</td>
</tr>
<tr>
<td>Hard Maple</td>
<td>0.63</td>
<td>1,83</td>
<td>7830</td>
<td>1450</td>
<td>2330</td>
<td>15800</td>
<td>4.8</td>
<td>9.9</td>
</tr>
<tr>
<td>Northern Red Oak</td>
<td>0.63</td>
<td>1,82</td>
<td>6760</td>
<td>1290</td>
<td>1780</td>
<td>14300</td>
<td>4.0</td>
<td>8.6</td>
</tr>
<tr>
<td>Black Walnut</td>
<td>0.55</td>
<td>1,68</td>
<td>7580</td>
<td>1010</td>
<td>1370</td>
<td>14600</td>
<td>5.5</td>
<td>7.8</td>
</tr>
</tbody>
</table>

Large differences in working properties do not generally occur among groups or classifications of woods. The categories provide a relative basis 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 characteristics 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 machining, 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.
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.

<table>
<thead>
<tr>
<th>Quality</th>
<th>A - Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>≥ 2.10m</td>
</tr>
<tr>
<td>Minimum cover width (measured half-wane)</td>
<td>≤ 32mm ≥ 100mm</td>
</tr>
<tr>
<td>≥ 32mm ≥ 120mm</td>
<td></td>
</tr>
<tr>
<td>Sound knots</td>
<td>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.</td>
</tr>
<tr>
<td>Dead knots, unsound knots</td>
<td>not allowed</td>
</tr>
<tr>
<td>Slope of grain</td>
<td>fairly straight slope of grain</td>
</tr>
<tr>
<td>Curly grain</td>
<td>not allowed</td>
</tr>
<tr>
<td>Inbark</td>
<td>90% of the pieces free on both sides, 10% of the pieces allowed, when compensated in size</td>
</tr>
<tr>
<td>Rot</td>
<td>not allowed</td>
</tr>
<tr>
<td>Discolourations</td>
<td>not allowed</td>
</tr>
<tr>
<td>Red heart</td>
<td>80% of the pieces free on both sides. Allowed at 20% of the pieces on the back up to 10% of the width.</td>
</tr>
<tr>
<td>Curvature</td>
<td>up to 2cm per running meter</td>
</tr>
<tr>
<td>Cracks, fissures</td>
<td>straight cracks up to 20% of the length permitted</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>B - Quality</th>
<th>C - Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 2,10m</td>
<td>90% ≥ 2,10m</td>
</tr>
<tr>
<td>≤ 32 mm ≥ 100 mm</td>
<td>≤ 32 mm ≥ 100 mm</td>
</tr>
<tr>
<td>&gt; 32 mm ≥ 120 mm</td>
<td>&gt; 32 mm ≥ 120 mm</td>
</tr>
</tbody>
</table>

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 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.

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

Straight and unstraight cracks up to 40% of the length permitted.
# Unedged Beech Lumber

## A - Quality

<table>
<thead>
<tr>
<th>F</th>
<th>R</th>
<th>F</th>
<th>R</th>
<th>F</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
</tbody>
</table>

### 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**

<table>
<thead>
<tr>
<th>SI units</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>$\geq 2.10 \text{ m}$</td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>$\leq 32 \text{ mm thick}$</td>
<td>$\geq 100 \text{ mm}$</td>
</tr>
<tr>
<td></td>
<td>$&gt; 32 \text{ mm thick}$</td>
<td>$\geq 120 \text{ mm}$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US/UK units</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>$\geq 7'$</td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>$\leq 5/4'' \text{ thick}$</td>
<td>$\geq 4''$</td>
</tr>
<tr>
<td></td>
<td>$&gt; 5/4'' \text{ thick}$</td>
<td>$\geq 5''$</td>
</tr>
</tbody>
</table>

**Grading** in accordance with E.O.S
Unedged Beech Lumber

C - Quality

F = Face
R = Reverse side

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>R</th>
<th>F</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SI units**

- **Length**
  - 90% ≥ 2.10 m
  - 10% ≥ 1.80 m
- **Width**
  - ≤ 32 mm thick ≥ 100 mm
  - > 32 mm thick ≥ 120 mm

**US/UK units**

- **Length**
  - 90% ≥ 7’
  - 10% ≥ 6’
- **Width**
  - ≤ 5/4” thick ≥ 4”
  - > 5/4” thick ≥ 5”
- **Grading**
  - in accordance with E.O.S
Quality grades similar to C, however, allow red heart.
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

<table>
<thead>
<tr>
<th>F</th>
<th>R</th>
<th>F</th>
<th>R</th>
<th>F</th>
<th>R</th>
<th>F</th>
<th>R</th>
</tr>
</thead>
</table>

**FAS**

- **F** = Face
- **R** = Reverse side

**SI units**
- Length: ≥ 2.45 m
- Width: ≥ 150 mm

**US/UK units**
- Length: ≥ 8’
- Width: ≥ 6”

**Grading**: in accordance with NHLA

**Yield**: ≥ 83.33%
Square Edged Beech Lumber

FAS/ 1F

<table>
<thead>
<tr>
<th>F</th>
<th>R</th>
<th>F</th>
<th>R</th>
<th>F</th>
<th>R</th>
<th>F</th>
<th>R</th>
</tr>
</thead>
</table>

**SI units**
- Length: ≥ 2,45 m
- Width: ≥ 150 mm

**US/UK units**
- Length: ≥ 8’
- Width: ≥ 6”

Grading: in accordance with NHLA
Yield: ≥ 83,33%
Square Edged Beech Lumber

No. 1 COM

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>R</td>
<td>F</td>
<td>R</td>
<td>F</td>
<td>R</td>
<td>F</td>
<td>R</td>
</tr>
</tbody>
</table>

F = Face  
R = Reverse side

SI units
Length $\geq 1.85$ m
Width $\geq 80$ 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  ≥ 1.85 m
Width   ≥ 80 mm

US/UK units
Length  ≥ 6’
Width   ≥ 3”

Grading in accordance with NHLA
Yield   ≥ 50 %