# Imbuia

Flat sawn

Quarter sawn

Family. Lauraceae

Botanical Name(s).

*Ocotea porosa*

*Phoebe porosa (synonymous)*

Continent. Latin America

CITES. This species is not listed in the CITES Appendices (Washington Convention 2023).

## Description of logs

Diameter. From 80 to 120 cm

Thickness of sapwood. From 3 to 6 cm

Floats. Yes

Log durability. Moderate (treatment recommended)

## Description of wood

Colour reference. Yellow brown

Sapwood. Clearly demarcated

Texture. Fine

Grain. Straight or interlocked

Interlocked grain. Slight

Notes. Heartwood yellow brown to dark brown with irregular thin darker veins. Pleasant scent.

## Physics and mechanics

*The properties indicated are for mature wood. These properties may vary significantly depending on the origin and growing conditions of the wood.*

| Property | Average value |
|---|---|
| Specific gravity[1] | 0.71 |
| Monnin hardness[1] | 4.9 |
| Coefficient of volumetric shrinkage | 0.45 % per % |
| Total tangential shrinkage (St) | 6.8 % |
| Total radial shrinkage (Sr) | 3.3 % |
| Ratio St/Sr | 2.1 |
| Fibre saturation point | 25 % |
| Thermal conductivity (λ) | 0.24 W/(m.K) |
| Lower heating value | 19,830 kJ/kg |
| Crushing strength[1] | 49 MPa |
| Static bending strength[1] | 84 MPa |
| Modulus of elasticity[1] | 9,260 MPa |

*[1] At 12 % moisture content, with 1 MPa = 1 N/mm*

## Natural durability and preservation



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Resistance to fungi. Class 3 - moderately durable

Resistance to dry wood borers. Class D - durable (sapwood demarcated, risk limited to sapwood)

Resistance to termites. Class M - moderately durable

Treatability. Class 2 - moderately permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

## Requirement of a preservative treatment

Against dry wood borer. Does not require any preservative treatment

In case of temporary humidification. Requires appropriate preservative treatment

In case of permanent humidification. Use not recommended

## Drying

Drying rate. Slow

Risk of distorsion. Slight risk

Risk of casehardening. No known specific risk

Risk of checking. Slight risk

Risk of collapse. Yes

Notes. Slow drying recommended

Suggested drying program.

| Phases | Duration (H) | MC (%) probes | T (°C) | Rh (%) | UGL (%) |
|---|---|---|---|---|---|
| **Prewarm 1** | | > 50 | 50 | 87 | 17.0 |
| **Prewarm 2** | 4 | > 50 | 50 | 86 | 16.5 |
| **Drying** | | > 50 | 53 | 85 | 15.7 |
| | | 50 - 40 | 53 | 82.0 | 14.6 |
| | | 40 - 35 | 54 | 78.0 | 13.4 |
| | | 35 - 30 | 55 | 77.0 | 12.9 |
| | | 30 - 27 | 57 | 73.0 | 11.9 |
| | | 27 - 24 | 58 | 68.0 | 10.7 |
| | | 24 - 21 | 60 | 61.0 | 9.3 |
| | | 21 - 18 | 62 | 52.0 | 7.9 |
| | | 18 - 15 | 64 | 43.0 | 6.6 |
| | | 15 - 12 | 65 | 39.0 | 6.0 |
| | | 12 - 9 | 65 | 31.0 | 5.0 |
| | | 9 - 6 | 65 | 28.0 | 4.5 |
| **Conditioning** | 8 | | 58 | (3) | (2) |
| **Cooling** | (1) | | Stop | (3) | (2) |

(1) ) Cooling: until the temperature inside the kiln no longer exceeds external temperature by more than 30 °C.

(2) UGL = final H% x 0,8 to 0,9.

(3) Subtract RH from the UGL determined in (2) and temperature, using the Hailwood-Horrobin equation.

## Sawing and machining

Blunting effect. Normal

Sawteeth recommended. Ordinary or alloy steel

Cutting tools. Ordinary



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Peeling. Good

Slicing. Good

Notes. Sawdust may cause dermatosis.

## Assembling

Nailing and screwing. Good

## Commercial grading

Appearance grading for sawn timbers.

According to ATIBT grading rules, possible grade: FAS (First And Second), n°1 Common and select, n°2 Common

Visual grading for structural applications

No visual grading for structural applications

## Fire safety

Conventional French grading.

Thickness > 14 mm: M3 (moderately inflammable)
Thickness < 14 mm: M4 (easily inflammable)

Euroclasses grading. D-s2, d0

Default grading for solid wood, according to requirements of European standard EN 14081-1+A1 (August 2019). It concerns structural graded timber in vertical uses and ceiling with mean density upper 0.35 and thickness upper 22 mm.

## End-uses

- Cabinetwork (high class furniture)
- Current furniture or furniture components
- Exterior joinery
- Exterior panelling
- Flooring
- Indoor staircases
- Interior joinery
- Interior panelling
- Light carpentry
- Moulding
- Ship building (planking and deck)
- Sliced veneer
- Turned goods
- Veneer for back or face of plywood
- Wood frame house

Notes. Used as a substitute for the European WALNUT (*Juglans regia*). Recommended for high class end-uses.

## Main local names

| Country | Local name |
|---|---|
| Brazil | Canela imbuia |
| Brazil | Embuia |
| Brazil | Imbuia |
| United Kingdom (importated tropical timber) | Brazilian walnut |
| United States of America (importated tropical timber) | Brazilian walnut |



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