

Ayous



Scientific Name(s)

Triplochiton scleroxylon

Family

MALVACEAE (angiosperm)

Commercial Restriction

No commercial restriction

Ayous lumber is a lightweight and versatile wood commonly used in various applications. This specie has a pale yellow to light brown colour, often with subtle variations. The wood's grain is typically straight and even, giving it a smooth and uniform appearance. It has a fine to medium texture, which makes it easy to work with using both hand and machine tools.

One of the notable qualities of Ayous lumber is its lightweight nature. It has a low density, making it easy to handle and install. Despite its lightness, Ayous wood still possesses good stability and dimensional resistance, meaning it is less prone to warping or shrinking when exposed to changes in humidity.

Ayous lumber is known for its excellent workability. It cuts cleanly, sands smoothly, and accepts finishes and paints well. It is often used in applications that require precise machining and intricate detailing.

While Ayous lumber is not as durable as some other hardwoods, it can still offer reasonable resistance to decay and insect attacks. It is commonly used for interior projects, such as cabinetry, furniture, millwork, and decorative trim. Its light colour and smooth surface also make it suitable for painting or staining to achieve various desired finishes.

Your natural resistance can be improved through Thermally modified process. The thermal modification process alters the wood's cellular structure, reducing its moisture content and increasing its dimensional stability. Themo Ayous exhibits improved resistance to shrinking, warping, and cupping, making it highly suitable for outdoor applications where moisture and weathering are concerns.

Wood Description

Color: light yellow

Sapwood: not demarcated

Texture: medium

Grain: straight or interlocked

Interlocked grain: slight

Note: Black holes, brittleheart, ring shakes and grub holes in some logs. Yellowish white to light yellow, heartwood sometimes darker. Ribbon like aspect on quartersawn. Grain sometimes irregular.

Log Description

Diameter: from 60 to 140cm

Floats: yes

Log durability: low (must be treated)



Physical, Mechanical and Acoustic Properties

Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.

Stability: moderately stable to stable

Musical quality factor: 111,2 measured at 2468 Hz

(*: at 12% moisture content, with 1 MPa = 1 N/mm²)

	Mean	Std dev.
Specific gravity *:	0,38	0,05
Monnin hardness *:	1,1	0,4
Coeff. of volumetric shrinkage:	0,36%	0,11%
Total tangential shrinkage (TS):	5,00%	0,50%
Total radial shrinkage (RS):	2,90%	0,40%
TS/RS ratio:	1,7	-
Fiber saturation point:	29%	-
Crushing strength *:	30MPa	4MPa
Static bending strength *:	52MPa	9MPa
Modulus of elasticity *:	7260MPa	1574MPa

Requirement of a Preservative Treatment

Against dry wood borer attacks: requires appropriate preservative treatment

In case of risk of temporary humidification: use not recommended

In case of risk of permanent humidification: use not recommended

Natural Durability and Treatability

Fungi and termite resistance refers to end-uses under temperate climate. Except for special comments on sapwood, natural durability is based on mature heartwood. Sapwood must always be considered as non-durable against wood degrading agents.

E.N. = Euro Norm

Funghi (according to E.N. standards): class 5
- not durable

Dry wood borers: susceptible - sapwood not or slightly demarcated (risk in all the wood)

Termites (according to E.N. standards): class S
- susceptible

Treatability (according to E.N. standards): class 3
- poorly permeable

Use class ensured by natural durability: class 1
- inside (no dampness)

Species covering the use class 5: no

Note: This species is listed in the European standard NF EN 350-2. Poorly to moderately permeable to preservative treatment. Prone to blue stain and dote.

Drying

Drying rate: rapid

Risk of distortion: no risk or very slight risk

Risk of casehardening: no

Risk of checking: no risk or very slight risk

Risk of collapse: no

Possible drying schedule: 3

Note: During air drying, it is recommended to use large spacer sticks to allow a good air circulation.

This schedule is given for information only and is applicable to thickness lower or equal to 38 mm. It must be used in compliance with the code of practice.

For thickness from 38 to 75 mm, the air relative humidity should be increased by 5 % at each step.

For thickness over 75 mm, a 10 % increase should be considered.

M.C. (%)	Temperature (°C)		
	Dry-bulb	Wet-bulb	Air humidity (%)
Green	60	56	81
30	68	58	61
20	74	60	51
15	80	61	41

Sawing And Machining

Blunting effect: normal

Sawteeth recommended: ordinary or alloy steel

Cutting tools: ordinary

Peeling: good

Slicing: good

Note: Tends to crumble when machining end grain and tends to tear in mortising (it is recommended to keep sharp edges and to reduce the cutting angle). Filling recommended.

Commercial Grading

Appearance grading for sawn timbers:

- According to SATA grading rules (1996)

- For the "General Purpose Market":

- **Possible grading for square edged timbers:** choix I, choix II, choix III, choix IV

- **Possible grading for short length lumbers:** choix I, choix II

- **Possible grading for short length rafters:** choix I, choix II, choix III

- **For the "Special Market":**

- **Possible grading for strips and small boards (ou battens):** choix I, choix II, choix III

- **Possible grading for rafters:** choix I, choix II, choix III

End-uses

- Moulding
- Veneer for back or face of plywood
- Boxes and crates
- Interior panelling
- Blockboard
- Matches
- Pencils
- Veneer for interior of plywood
- Current furniture or furniture components
- Interior joinery
- Fiber or particle boards
- Sculpture
- Sliced veneer

Note: Substitute for POPLAR (Populus spp.) for several end-uses: light furniture, panelling..

Assembling

Nailing / screwing: poor

Gluing: correct

Note: Gluing must be done carefully: absorbent wood.

Fire Safety

Conventional French grading:

- **Thickness > 14 mm :** M.3 (moderately inflammable)

- **Thickness < 14 mm :** M.4 (easily inflammable)

Euroclasses grading: D s2 d0

Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009).

It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

Main Local Names

Country	Local Name
Benin	Xwetin
Cameroon	Ayus
Ivory Coast	Samba
Ghana	Wawa
Equatorial Guinea	Ayus
Nigeria	Obeche
Central African Republic	M'bado
France	Ayous
United Kingdom	Ayous
United Kingdom	Wawa
Cameroon	Ayous
Congo	Eguess
Gabon	Ayous
Equatorial Guinea	Ayous
Nigeria	Arere
Central African Republic	Bado
Germany	Abacho
France	Samba
United Kingdom	Obeche

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