

Obeche

Family. Malvaceae

Botanical Name(s).

Triplochiton scleroxylon

Continent. Africa

CITES.

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

Description of logs

Diameter. From 60 to 140 cm

Thickness of sapwood. -

Floats. Yes

Log durability. Low (treatment necessary)

Description of wood

Colour reference. Light yellow

Sapwood. Not demarcated

Texture. Medium

Grain. Straight or interlocked

Interlocked grain. Slight

Notes. 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.

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	0.38
Monnin hardness ¹	1.1
Coefficient of volumetric shrinkage	0.36 % per %
Total tangential shrinkage (St)	5.0 %
Total radial shrinkage (Sr)	2.9 %
Ratio St/Sr	1.7 %
Fibre saturation point	29 %
Thermal conductivity (λ)	0.14 W/(m.K)
Lower heating value	18,990 kJ/kg
Crushing strength ¹	30 MPa
Static bending strength ¹	52 MPa
Modulus of elasticity ¹	7,260 MPa

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



Flat sawn



Quarter sawn

Natural durability and preservation

Resistance to fungi. Class 5 - not durable

Resistance to dry wood borers. Class S - susceptible (risk in all the wood)

Resistance to termites. Class S - susceptible

Treatability. Class 3 - poorly permeable

Use class ensured by natural durability.

Class 1 - inside (no dampness)

Notes. This species is listed in the European standard NF EN 350 (2016). Poorly to moderately permeable to preservative treatment. Prone to blue stain and dote.

Requirement of a preservative treatment

Against dry wood borer. Requires appropriate preservative treatment

In case of temporary humidification. Use not recommended

In case of permanent humidification. Use not recommended

Drying

Drying rate. Rapid

Risk of distortion. No risk or very slight risk

Risk of casehardening. No known specific risk

Risk of checking. No risk or very slight risk

Risk of collapse. No known specific risk

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	58	84	15.0
Prewarm 2	3	> 50	63	81	13.5
Drying		> 50	65	72	11.0
		50 - 40	68	68.0	10.1
		40 - 35	68	62.0	9.0
		35 - 30	70	60.0	8.5
		30 - 27	72	54.0	7.6
		27 - 24	72	50.0	7.0
		24 - 21	74	43.0	6.1
		21 - 18	74	36.0	5.2
		18 - 15	75	31.0	4.5
		15 - 12	75	28.0	4.2
		12 - 9	75	25.0	3.8
		9 - 6	75	24.0	3.6
Conditioning	6		68	(3)	(2)
Cooling	(1)		Arrêt	(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

Peeling. Good

Slicing. Good

Notes. 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.

Assembling

Nailing and screwing. Poor

Notes. Very porous and absorbent: to be taken into account when gluing.

Commercial grading

Appearance grading for sawn timbers.

According to the ATIBT grading rules (2017), the main choices are: FAS (First And Second), n°1 Common and select, n°2 Common (see details of these rules on the ATIBT website).

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

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

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



Ceiling of Paris-Charles-de-Gaulle airport in Roissy-en-France, France (© Michel Vernay)

Main local names

Country	Local name
Benin	Xwetin
Cameroon	Ayous
Cameroon	Ayus
Central African Republic	Bado
Central African Republic	M'bado
Congo	Éguess
Côte d'Ivoire	Samba
Equatorial Guinea	Ayous
Equatorial Guinea	Ayus
France (importated tropical timber)	Ayous
France (importated tropical timber)	Samba
Gabon	Ayous
Germany (importated tropical timber)	Abachi
Ghana	Wawa
Nigeria	Arere
Nigeria	Obeche
United Kingdom (importated tropical timber)	Ayous
United Kingdom (importated tropical timber)	Obeche
United Kingdom (importated tropical timber)	Wawa