Avodire

Quarter sawn

Half-quarter sawn

Family. Meliaceae

Botanical Name(s).

Turraeanthus africana

Continent. Africa

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

Description of logs

Diameter. From 50 to 70 cm

Thickness of sapwood. -

Floats. Yes

Log durability. Low (treatment necessary)

Description of wood

Colour reference. Light yellow

Sapwood. Not demarcated

Texture. Fine

Grain. Straight or interlocked

Interlocked grain. Slight

Notes. Wood cream white or light yellow, lustrous aspect, turns to golden yellow with light. Moiré or ribbon like aspect on quartersawn.

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]	0.58
Monnin hardness[1]	2.7
Coefficient of volumetric shrinkage	0.36 % per %
Total tangential shrinkage (St)	6.6 %
Total radial shrinkage (Sr)	3.8 %
Ratio St/Sr	1.7
Fibre saturation point	39 %
Thermal conductivity (λ)	0.20 W/(m.K)
Lower heating value	19,590 kJ/kg
Crushing strength[1]	52 MPa
Static bending strength[1]	94 MPa
Modulus of elasticity[1]	12,590 MPa

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

Natural durability and preservation

Resistance to fungi. Class 4 - poorly durable

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

Resistance to termites. Class S - susceptible

Treatability. Class 4 - not permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

Notes. This species is listed in the European standard NF EN 350 (2016). Prone to blue stain.

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 to normal

Risk of distorsion. High risk

Risk of casehardening. No known specific risk

Risk of checking. Slight risk

Risk of collapse. No known specific risk

Notes. Existing end checks tend to enlarge.

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	50	86	16.5
Prewarm 2	3	> 50	52	85	16.0
Drying		> 50	55	82	14.7
		50 - 40	55	80.0	13.8
		40 - 35	55	75.0	12.6
		35 - 30	56	73.0	12.0
		30 - 27	58	67.0	10.5
		27 - 24	60	58.0	8.9
		24 - 21	62	50.0	7.5
		21 - 18	64	45.0	6.8
		18 - 15	65	37.0	5.7
		15 - 12	65	34.0	5.3
		12 - 9	65	28.0	4.5
		9 - 6	65	24.0	4.0
Conditioning	6		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. Bad

Slicing. Good

Notes. Poor aptitude for peeling (irregular logs). Very irritant sawdust; good ventilation required. Sometimes tearing in planing.

Assembling

Nailing and screwing. Good but pre-boring necessary

Notes. Slight tendency to split when nailing.

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).

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
- Interior joinery
- Interior panelling
- Moulding
- Musical instruments
- Sliced veneer

Notes. Substitute for SYCOMORE (Acer spp.) for furnitures.

Main local names

Country	Local name
Belgium (importated tropical timber)	Lusamba
Cameroon	Asama
Côte d'Ivoire	Avodiré
Democratic Republic of the Congo	Lusamba
Democratic Republic of the Congo	M'fubé
Ghana	Apapaya
Ghana	Avodire
Liberia	Blima-pu
Nigeria	Apaya

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