



Sapele

Entandrophragma cylindricum Sprague

Commercial names:

English:	Sapele, Scented mahogany.
Spanish:	Sappelli, Abebay, Caoba de Guinea.
French:	Sapelli, Aboudikro, Lifaki, Caoba de Guinea.
Italian:	Sapelli, Aboudikro.
German:	Sapelli-Mahagani, Aboudikro, Lifaki.

Common names:

Ivory Coast:	Aboudikro.
Ghana:	Penkwa.
Nigeria:	Sapele.
Central Africa:	M'boyo.
Cameroon:	Assie-Sapelle.
Zaire:	Lifaki, Libuyo.
Angola:	Undianuno.
Congo:	Undianuno, Lifaki.
Uganda:	Muyovu.
Gabon:	Assié, Dilolo.

Physical properties:

Density:	640-650-700 Kg/m ³	
Shrinkage:	Moderately unstable.	
Shrinkage values:	Total	Unitary
Volumetric:	13.1%	(0.47)
Tangential:	7.2-7.8%	(0.26-0.32)
Radial:	5.0-5.3%	(0.19-0.24)
Hardness:	3.6-4.2	Semi-hard

Mechanical properties (Wood free of defects)

Static bending:	85-142 N/mm ²
Modulus of elasticity:	10,300-10,800 N/mm ²
Compression parallel to grain:	50-62 N/mm ²
Compression perpendicular to grain:	11.5 N/mm ²
Shear:	7.5-14.0 N/mm ²
Toughness:	3.3-6.7 J/cm ²

Origin and availability:

This wood is found in western and central Africa. The forested area, production and export are stable.

Wood description:

Sapwood varies from a whitish grey to cream, and heartwood ranges from pink when freshly cut, to a reddish or purplish brown when exposed to light. The sapwood is clearly differentiated and in roundwood it occupies a width of 4 to 8 cm. The wood rays are fine and wavy, and they are evenly distributed. The grain is interlocked and the texture of the grain is fine or medium. The wood has a characteristic aroma reminiscent of cedar that lingers for a relatively long time. Occasionally it can exude resin. Its main defect is the possible presence of a visual anomaly like "barley grains".

Drying:

This wood dries at a normal rate. There is a high risk of warping and checks. Edge-grained (quartersawn) lumber takes much longer to dry. The recommended drying schedules are number 1 from the CTBA, number 2 from the CTFT, schedule A from the PRL, and T2-D4 (4/4 and T2-D3 (8/4) from the FPLM.

Natural durability and ease of penetration:

The wood is rated as moderately durable against the action of fungi and termites, resistant to lyctids and susceptible to marine borers. The heartwood is slightly penetrable and the sapwood is moderately penetrable.

Technological properties:

This wood is easy to saw. Rotating roundwood during sawing is advisable in order to diminish the effect of internal tension. Saws dull at a normal rate, and steel or steel alloy tools can be used. The wood is suitable for rotary-cut veneer and sliced veneer. Machining can be difficult due to interlocked grain, and tearing can occur. Tools become dull at a normal rate; conventional tools can be used. Gluing, nailing and screwing present no problem.

Applications:

Decorative veneer./ Plywood./ Interior carpentry: handrails, railings./ Exterior carpentry./ Naval construction: luxury vessels.

The presence of slightly interlocked grain is highly valued in decorative veneer. On the other hand, extremely interlocked grain cannot be used in some of the applications mentioned above.