Olène

Family. Irvingiaceae

Botanical Name(s).

Irvingia grandifolia

Continent. Africa

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

Half-quarter sawn

Flat sawn

Description of logs

Diameter. From 60 to 120 cm

Thickness of sapwood. From 10 to 20 cm

Floats. No

Log durability. Moderate (treatment recommended)

Description of wood

Colour reference. Dark brown

Sapwood. Clearly demarcated

Texture. Medium

Grain. Straight

Interlocked grain. Absent

Notes. Sapwood yellow-brown. Heartwood with various shades of brown with a grey lustre.

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]	0.92
Monnin hardness[1]	7.1
Coefficient of volumetric shrinkage	0.56 % per %
Total tangential shrinkage (St)	10.1 %
Total radial shrinkage (Sr)	6.2 %
Ratio St/Sr	1.6
Fibre saturation point	29 %
Thermal conductivity (λ)	0.30 W/(m.K)
Lower heating value	
Crushing strength[1]	73 MPa
Static bending strength[1]	136 MPa
Modulus of elasticity[1]	18,550 MPa

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

Natural durability and preservation

Resistance to fungi. Class 3 - moderately durable

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

Resistance to termites. Class M - moderately durable

Treatability. Class 3-4 - poorly or not permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

Requirement of a preservative treatment

Against dry wood borer. Requires appropriate 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. High risk

Risk of casehardening. No known specific risk

Risk of checking. High risk

Risk of collapse. No known specific risk

Notes.

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	40	86	17.0
Prewarm 2	4	> 50	43	85	16.5
Drying		> 50	45	83	15.7
		50 - 40	45	80.0	14.6
		40 - 35	45	77.0	13.8
		35 - 30	45	74.0	12.9
		30 - 27	47	69.0	11.5
		27 - 24	49	61.0	9.9
		24 - 21	50	52.0	8.4
		21 - 18	53	48.0	7.7
		18 - 15	56	41.0	6.6
		15 - 12	59	36.0	5.9
		12 - 9	61	30.0	5.0
		9 - 6	65	29.0	4.7
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. Fairly high

Sawteeth recommended. Stellite-tipped

Cutting tools. Tungsten carbide

Peeling. Not recommended or without interest

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Slicing. Not recommended or without interest

Notes. Dulling effect on cutting edges due to resin cells.

Assembling

Nailing and screwing. Good but pre-boring necessary

Notes. High specific gravity: gluing must be especially performed in compliance with the code of practice.

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

- Decking
- Exterior joinery
- Flooring
- Industrial or heavy flooring
- Interior joinery
- Ship building
- Tool handles (resilient woods)
- Turned goods
- Vehicle or container flooring
- Wood frame house

Notes. Not in the international market, barely used at a local scale.

Main local names

Country	Local name
Cameroon	Andok ngoe
Cameroon	Andongwé
Cameroon	Bwibanjoe
Cameroon	Géndo
Cameroon	Ikomkpa
Cameroon	Solia
Central African Republic	Sombo
Congo	Liar
Democratic Republic of the Congo	Mukessu
Democratic Republic of the Congo	Ntesi

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Main local names

Country	Local name
Gabon	Olène
Nigeria	Akhuekhue
Nigeria	Apepere

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