

Nieuk

Family. Fabaceae-Mimosoideae

Botanical Name(s).

Fillaeopsis discophora

Continent. Africa

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

Description of logs

Diameter. From 80 to 130 cm

Thickness of sapwood. From 5 to 10 cm

Floats. Yes

Log durability. Good

Description of wood

Colour reference. Pinkish brown

Sapwood. Not clearly demarcated

Texture. Coarse

Grain. Interlocked

Interlocked grain. Marked

Notes. Wood is pinkish brown to greyish brown with orange brown veins. Presence of transition wood between the yellowish white sapwood and the coloured heartwood. Log is often sinuous.

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	2.6
Coefficient of volumetric shrinkage	0.42 % per %
Total tangential shrinkage (St)	6.4 %
Total radial shrinkage (Sr)	3.3 %
Ratio St/Sr	1.9
Fibre saturation point	25 %
Thermal conductivity (λ)	0.20 W/(m.K)
Lower heating value	
Crushing strength ¹	45 MPa
Static bending strength ¹	79 MPa
Modulus of elasticity ¹	11,700 MPa

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

Natural durability and preservation



Quartersawn



Flat sawn

Resistance to fungi. Class 4 - poorly durable

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

Resistance to termites. Class S - susceptible

Treatability. Class 2 - moderately permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

Notes. Natural durability to fungi is very variable.

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. 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.

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. Stellite-tipped

Cutting tools. Tungsten carbide

Peeling. Good

Slicing. Not recommended or without interest

Notes. NIEUK emits an unpleasant odour when green.

Assembling

Nailing and screwing. Good

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

- Boxes and crates
- Formwork
- Veneer for interior of plywood

Notes. Its processing shows numerous difficulties linked particularly to the interlocked grain or to a weak stability. These blemishes strongly limit use possibilities for this species. It must be processed with a great respect to the code of practice.

Main local names

Country	Local name
Cameroon	Éyek
Congo	Mouali
Congo	Moulala
Equatorial Guinea	Angocon
France (importated tropical timber)	Nieuk
Gabon	Énoumnomé
Gabon	Éyegh
Gabon	Tfouma