

Family: MALVACEAE (angiosperm)

Scientific name(s): Ceiba pentandra

Ceiba thoningii (synonymous)

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: creamy white
Sapwood: not demarcated
Texture: coarse
Grain: interlocked
Interlocked grain: slight

Note: Logs must be treated, extracted, sawn and dried as soon as possible after felling. Some logs are not floatable.
Wood cream white to light yellow, often with greyish veins.

LOG DESCRIPTION

Diameter: from 70 to 150 cm
Thickness of sapwood:
Floats: yes
Log durability: low (must be treated)

PHYSICAL PROPERTIES

Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.

	<u>Mean</u>	<u>Std dev.</u>
Specific gravity *:	0,32	0,03
Monnin hardness *:	0,8	0,2
Coeff. of volumetric shrinkage:	0,36 %	0,07 %
Total tangential shrinkage (TS):	6,3 %	1,3 %
Total radial shrinkage (RS):	3,0 %	0,4 %
TS/RS ratio:	2,1	
Fiber saturation point:	34 %	
Stability:	moderately stable to poorly stable	

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	22 MPa	3 MPa
Static bending strength *:	36 MPa	8 MPa
Modulus of elasticity *:	5130 MPa	1462 MPa

(*: at 12% moisture content, with 1 MPa = 1 N/mm²)

Musical quality factor: 102,7 measured at 2146 Hz

NATURAL DURABILITY AND TREATABILITY

Fungi and termite resistance refers to end-uses under temperate climate. Except for special comments on sapwood, natural durability is based on mature heartwood. Sapwood must always be considered as non-durable against wood degrading agents.

E.N. = Euro Norm

Funghi (according to E.N. standards): class 5 - not durable

Dry wood borers: susceptible - sapwood not or slightly demarcated (risk in all the wood)

Termites (according to E.N. standards): class S - susceptible

Treatability (according to E.N. standards): class 1 - easily permeable

Use class ensured by natural durability: class 1 - inside (no dampness)

Species covering the use class 5: No

Note: This species is listed in the European standard NF EN 350-2.

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: requires appropriate preservative treatment

In case of risk of temporary humidification: requires appropriate preservative treatment

In case of risk of permanent humidification: use not recommended

DRYING

Drying rate: normal to slow

Possible drying schedule: 3

Risk of distortion: slight risk

Risk of casehardening: no

Risk of checking: slight risk

Risk of collapse: no

Note: A rather slow drying is recommended due to the important moisture content when green.

M.C. (%)	Temperature (°C)		Air humidity (%)
	dry-bulb	wet-bulb	
Green	60	56	81
30	68	58	61
20	74	60	51
15	80	61	41

This schedule is given for information only and is applicable to thickness lower or equal to 38 mm.

It must be used in compliance with the code of practice.

For thickness from 38 to 75 mm, the air relative humidity should be increased by 5 % at each step.

For thickness over 75 mm, a 10 % increase should be considered.

SAWING AND MACHINING

Blunting effect: normal

Sawteeth recommended: ordinary or alloy steel

Cutting tools: ordinary

Peeling: good

Slicing: not recommended or without interest

Note: Fuzzy surface. Keep sharp tools to obtain a better finish.

ASSEMBLING

Nailing / screwing: poor

Gluing: correct

FIRE SAFETY

Conventional French grading: Thickness > 14 mm : M.3 (moderately inflammable)

Thickness < 14 mm : M.4 (easily inflammable)

Euroclasses grading: -

Out of grading (low density).

END-USES

Veneer for interior of plywood

Blockboard

Current furniture or furniture components

Boxes and crates

Moulding

Insulation

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Benin	ADJOLOHUTIN	Benin	HUTIN
Cameroon	BOUMA	Cameroon	DOUM
Congo	FUMA	Ivory Coast	ENIA
Ivory Coast	FROMAGER	Gabon	ODOUMA
Ghana	CEIBA	Ghana	ONYINA
Liberia	GHE	Nigeria	ARABA
Nigeria	OKHA	Central African Republic	GILA
Democratic Republic of the Congo	FUMA	Sierra Leone	BANDA
Sierra Leone	NGWE	Germany	CEIBA
France	FROMAGER	Netherlands	KAKANTRIE
United Kingdom	CEIBA	United States of America	SILK COTTON-TREE

