

Family: FABACEAE-CAESALPINIOIDEAE (angiosperm)

Scientific name(s): Gilbertiodendron dewevrei  
 Macrobium dewevrei (synonymous)  
 Gilbertiodendron preussii  
 Gilbertiodendron brachystegioides

Commercial restriction: no commercial restriction

## WOOD DESCRIPTION

Color: red brown  
 Sapwood: clearly demarcated  
 Texture: coarse  
 Grain: straight or interlocked  
 Interlocked grain: slight

Note: Wood red brown with greenish or copper shades. Possible internal stresses.

## LOG DESCRIPTION

Diameter: from 60 to 100 cm  
 Thickness of sapwood: from 5 to 10 cm  
 Floats: no  
 Log durability: moderate (treatment recommended)

## 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 *:	0,81	0,05
Monnin hardness *:	5,1	1,1
Coeff. of volumetric shrinkage:	0,62 %	0,05 %
Total tangential shrinkage (TS):	9,1 %	0,8 %
Total radial shrinkage (RS):	4,7 %	0,5 %
TS/RS ratio:	1,9	
Fiber saturation point:	28 %	
Stability:	moderately stable	

## MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	72 MPa	5 MPa
Static bending strength *:	137 MPa	13 MPa
Modulus of elasticity *:	18010 MPa	2889 MPa

(\*: at 12% moisture content, with 1 MPa = 1 N/mm<sup>2</sup>)

Musical quality factor: 120 measured at 2683 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 2 - durable

Dry wood borers: durable - sapwood demarcated (risk limited to sapwood)

Termites (according to E.N. standards): class M - moderately durable

Treatability (according to E.N. standards): class 3 - poorly permeable

Use class ensured by natural durability: class 3 - not in ground contact, outside

Species covering the use class 5: No

Note: Good resistance to white rot. Moderate resistance to brown cubical rot.

According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

## REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: does not require any preservative treatment

In case of risk of temporary humidification: does not require any preservative treatment

In case of risk of permanent humidification: use not recommended

## DRYING

Drying rate: slow

Risk of distortion: high risk

Risk of casehardening: no

Risk of checking: high risk

Risk of collapse: no

Note: Drying must be handled with care to reduce risks of cracks. Air drying under cover recommended.

Possible drying schedule: 2

M.C. (%)	Temperature (°C)		Air humidity (%)
	dry-bulb	wet-bulb	
Green	50	47	84
40	50	45	75
30	55	47	67
20	70	55	47
15	75	58	44

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: fairly high

Sawteeth recommended: stellite-tipped

Cutting tools: tungsten carbide

Peeling: bad

Slicing: not recommended or without interest

Note: Requires power. Log turning sawing recommended as soon as possible after felling (risks of splitting).

## ASSEMBLING

Nailing / screwing: good but pre-boring necessary

Gluing: correct (for interior only)

## COMMERCIAL GRADING

Appearance grading for sawn timbers: According to SATA grading rules (1996)

For the "General Purpose Market":

Possible grading for square edged timbers: choix I, choix II, choix III, choix IV

Possible grading for short length lumbers: choix I, choix II

Possible grading for short length rafters: choix I, choix II, choix III

For the "Special Market":

Possible grading for strips and small boards (ou battens): choix I, choix II, choix III

Possible grading for rafters: choix I, choix II, choix III

## FIRE SAFETY

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

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

Euroclasses grading: D s2 d0

Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009). It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

## END-USES

Heavy carpentry

Exterior joinery

Exterior panelling

Ship building (planking and deck)

Stairs (inside)

Industrial or heavy flooring

Interior joinery

Interior panelling

Vehicle or container flooring

Wood frame house

## MAIN LOCAL NAMES

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<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Cameroon	EKOBEM	Congo	EPAL
Ivory Coast	VAA	Gabon	ABEUM
Ghana	TETEKON	Liberia	SEHMEH
Nigeria	EKPAGOI EZE	Central African Republic	MOLAPA
Democratic Republic of the Congo	DITSHIPI	Democratic Republic of the Congo	LIGUDU
Democratic Republic of the Congo	LIMBALI		

