

Family: MELIACEAE (angiosperm)

Scientific name(s): *Guarea cedrata*  
*Guarea thompsonii*  
*Guarea laurentii*

Commercial restriction: no commercial restriction

Note: *G. cedrata* and *G. laurentii* are called light BOSSE; *G. thompsonii* is called dark BOSSE.

## WOOD DESCRIPTION

Color: pinkish brown  
 Sapwood: clearly demarcated  
 Texture: fine  
 Grain: interlocked  
 Interlocked grain: slight

Note: Irregular or wavy grain. *G. thompsonii* presents a straighter grain. It is also almost floatable. Wood pinkish brown (*G. cedrata*) to orangey brown (*G. thompsonii*). Aspect slightly moiré. *G. cedrata* has a cedar scent and a tendency to resin exudation.

## 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 *:	0,63	0,03
Monnin hardness *:	4,2	1,1
Coeff. of volumetric shrinkage:	0,45 %	0,06 %
Total tangential shrinkage (TS):	6,8 %	0,7 %
Total radial shrinkage (RS):	4,1 %	1,0 %
TS/RS ratio:	1,7	
Fiber saturation point:	31 %	
Stability: stable		

## MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	55 MPa	8 MPa
Static bending strength *:	95 MPa	14 MPa
Modulus of elasticity *:	12650 MPa	2899 MPa

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

Musical quality factor: 120,6 measured at 2475 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 S - susceptible

Treatability (according to E.N. standards): class 4 - not permeable

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

Species covering the use class 5: No

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

Light Bossé has a moderate resistance to fungi. Dark Bossé is durable.

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: rapid to normal  
 Risk of distortion: slight risk  
 Risk of casehardening: no  
 Risk of checking: slight risk  
 Risk of collapse: no

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

Note: The tendency to resin exudation, especially for G.cedrata may have an influence on the aspect of dried timbers.

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: good  
 Slicing: good

Note: The silica content of G.cedrata can be high to very high. Irritant sawdust.

## ASSEMBLING

Nailing / screwing: good  
 Gluing: correct

Note: Pre-boring may be necessary for G.thompsonii due to its hardness. Gluing G. cedrata may be difficult due to resin exudations.

## 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

Exterior joinery  
 Interior panelling  
 Ship building (planking and deck)  
 Cabinetwork (high class furniture)  
 Cigar boxes  
 Veneer for back or face of plywood  
 Flooring

Interior joinery  
 Exterior panelling  
 Sliced veneer  
 Current furniture or furniture components  
 Veneer for interior of plywood  
 Rolling shutters  
 Light carpentry

Note: Filling is recommended to obtain a better finish. Resin exudations may be an inconvenient for some uses.

**MAIN LOCAL NAMES**

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<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Cameroon	EBANGBEMWA	Congo	NINDIAKAT
Ivory Coast	BOSSE	Ivory Coast	MUTIGBANAYE
Gabon	OSSOUNG	Ghana	GUAREA
Ghana	KWABOHORO	Kenya	BOLON
Nigeria	OBOBO NEKWI	Nigeria	OBOBO NOFUA
Central African Republic	N' ZOMBOU	Democratic Republic of the Congo	BOSASA
Democratic Republic of the Congo	DIAMBI	Germany	BOSSE
Germany	DIAMBI	United Kingdom	BLACK GUAREA
United Kingdom	SCENTED GUAREA		

