LOURO VERMELHO

Family: LAURACEAE (angiosperm)
Scientific name(s): Sextonia rubra
Ocotea rubra (synonymous)
Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: light brown
Sapwood: clearly demarcated
Texture: medium
Grain: interlocked
Interlocked grain: slight
Note: Light wood with pink to red brown shades. Possible presence of wind shakes.

LOG DESCRIPTION

Diameter: from 50 to 90 cm
Thickness of sapwood: from 3 to 5 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.

	Mean	Std dev.
Specific gravity *:	0,66	0,04
Monnin hardness *:	2,5	0,8
Coeff. of volumetric shrinkage:	0,54 %	0,06 %
Total tangential shrinkage (TS):	8,8 %	1,5 %
Total radial shrinkage (RS):	4,5 %	1,2 %
TS/RS ratio:	2,0	
Fiber saturation point:	29 %	
Stability:	moderately stable	

MECHANICAL AND ACOUSTIC PROPERTIES

	Mean	Std dev.
Crushing strength *:	51 MPa	8 MPa
Static bending strength *:	81 MPa	9 MPa
Modulus of elasticity *:	14170 MPa	2604 MPa

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

Musical quality factor: 95,3 measured at 2451 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 D - durable
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: Yes
Note: This species is listed in the European standard NF EN 350-2.
It naturally covers the use class 5 (end-uses in marine environment or in brackish water). However, it is not recommended to use it in case of strong mechanical constraints due to its soft hardness.
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: slight risk
Risk of casehardening: yes
Risk of checking: high risk
Risk of collapse: yes
Note: High temperature steaming (80°C) improves drying. Drying is not recommended for thickness > 40 mm .

Possible drying schedule: 4

	Temperature (°C)		
M.C. (%)	dry-bulb	wet-bulb	Air humidity (%)
Green	42	39	82
50	48	43	74
40	48	43	74
30	48	43	74
15	54	46	63

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: nood

ASSEMBLING

Nailing / screwing: poor
Gluing: correct
Note: Nails holding is variable. Gluing is correct with dry woods.

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to NHLA grading rules (January 2007)
Possible grading: FAS, Select, Common 1, Common 2, Common 4
In French Guiana, the local name of this species is "GRIGNON FRANC". Grading is done according to local rules "Bois guyanais classés".
Possible grading: Choix 1, choix 2, choix 3, choix 4

FIRE SAFETY

Conventional French grading: Thickness > 14 mm : M.3 (moderately inflammable)
Thickness < 14 mm : M.4 (easily inflammable)

Euroclasses grading: D s2 d0
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.

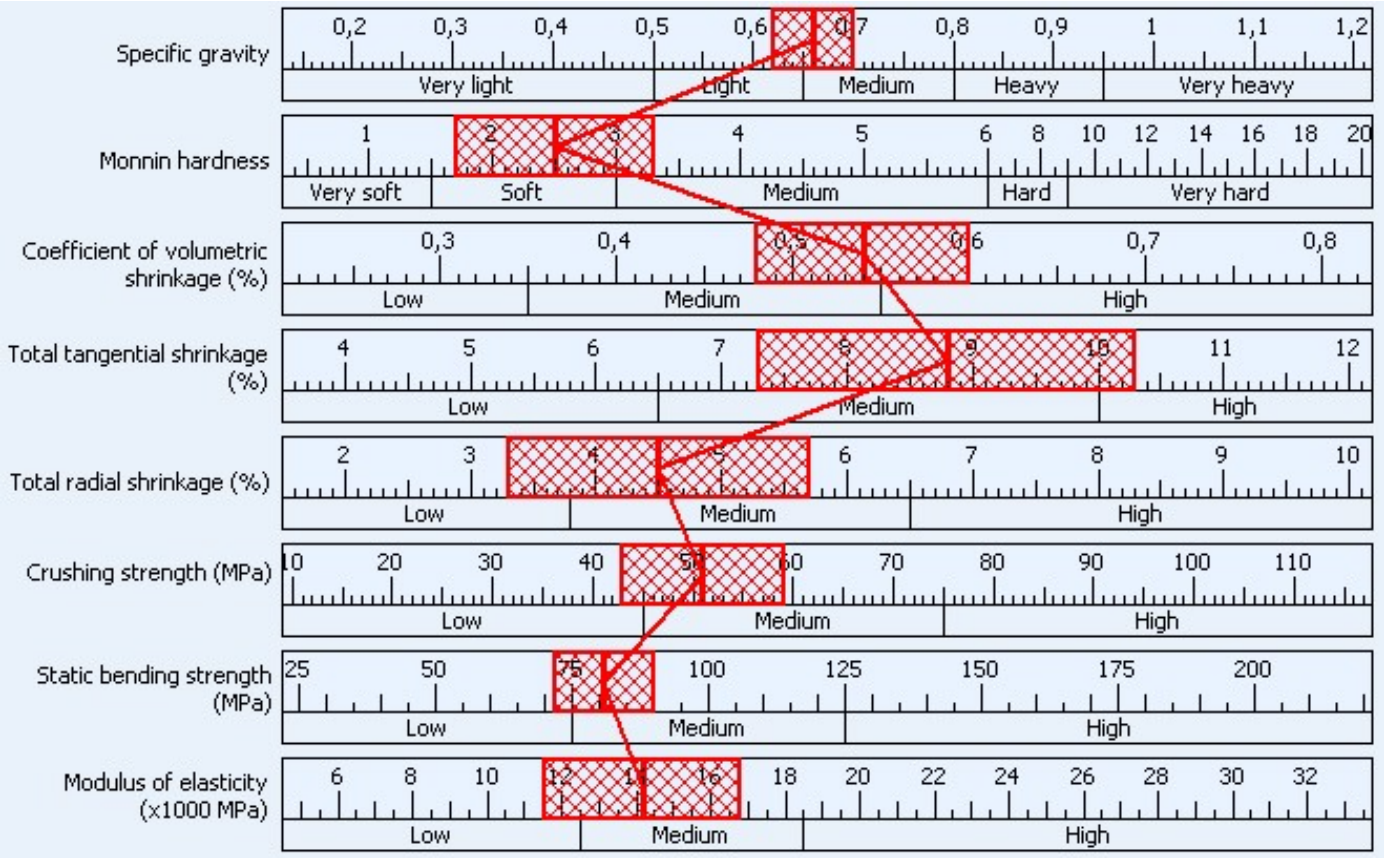
END-USES

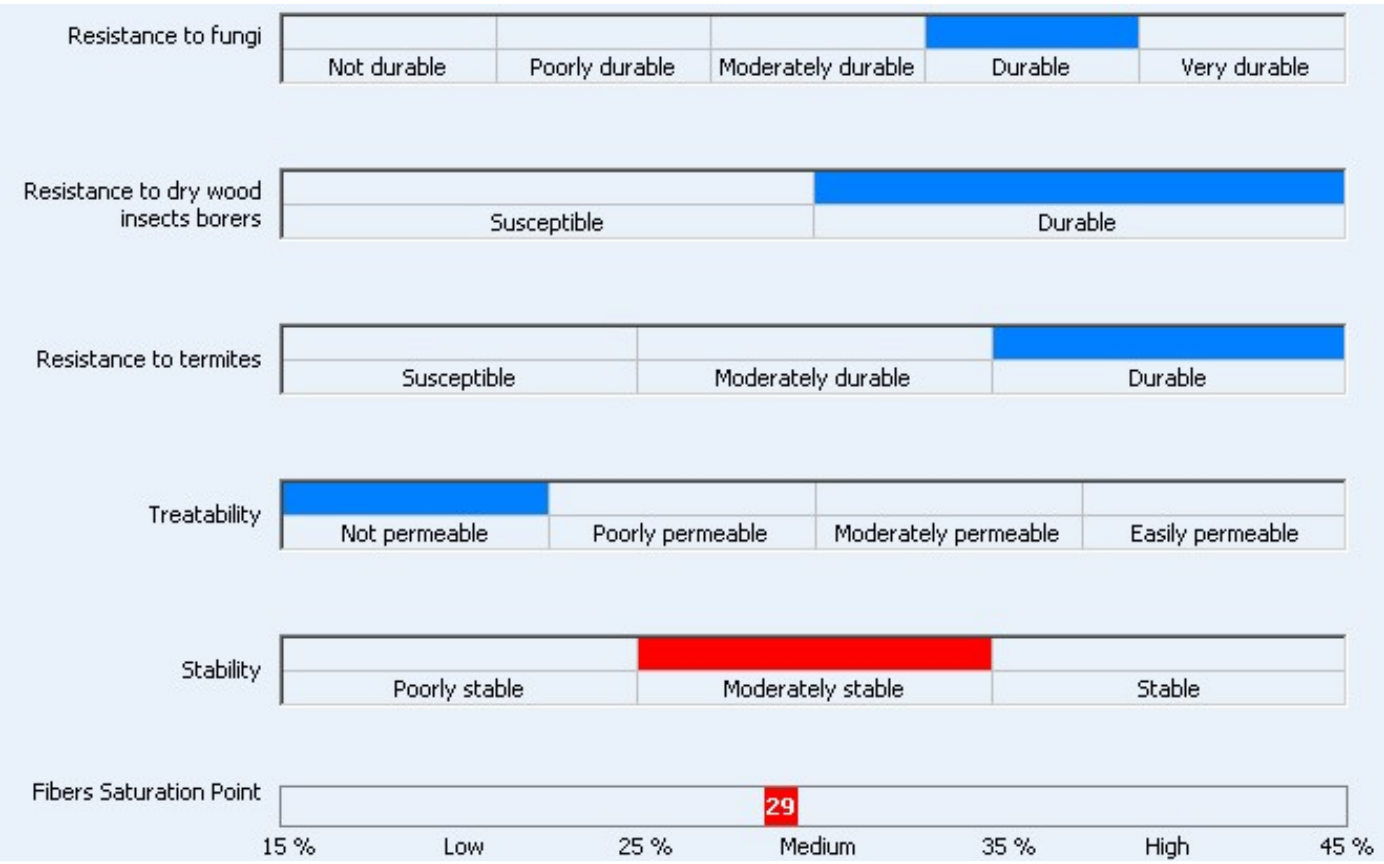
Interior joinery
Current furniture or furniture components
Ship building (planking and deck)
Exterior joinery
Moulding
Veneer for interior of plywood
Cabinetwork (high class furniture)
Boxes and crates
Bridges (parts not in contact with water or ground)
Shingles
Interior panelling
Open boats
Sliced veneer
Exterior panelling
Wood frame house
Veneer for back or face of plywood
Turned goods
Light carpentry
Formwork

Note: Drying problems may restrict end-uses.

MAIN LOCAL NAMES

Country	Local name	Country	Local name
Brazil (Amazon)	GAMELA	Brazil (Amazon)	LOURO GAMELA
Brazil (Amazon)	LOURO VERMELHO	Guyana	BAAKA
Guyana	DETERMA	Guyana	RED LOURO
Guyana	WANU	French Guiana	GRIGNON FRANC
Suriname	TETEROMA	Suriname	WANA
United Kingdom	DETERMA		


Specific gravity
0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9 1 1,1 1,2
Very light
Light
Medium
Heavy
Very heavy
Monnin hardness
1 2 3 4 5 6 8 10 12 14 16 18 20
Very soft
Soft
Medium
Hard
Very hard
Coefficient of volumetric shrinkage (%)
0,3 0,4 0,5 0,6 0,7 0,8
Low
Medium
High
Total tangential shrinkage (%)
4 5 6 7 8 9 10 11 12
Low
Medium
High
Total radial shrinkage (%)
2 3 4 5 6 7 8 9 10
Low
Medium
High
Crushing strength (MPa)
10 20 30 40 50 60 70 80 90 100 110
Low
Medium
High
Static bending strength (MPa)
25 50 75 100 125 150 175 200
Low
Medium
High
Modulus of elasticity (x1000 MPa)
6 8 10 12 14 16 18 20 22 24 26 28 30 32
Low
Medium
High


Resistance to fungi
Not durable
Poorly durable
Moderately durable
Durable
Very durable
Resistance to dry wood insects borers
Susceptible
Durable
Resistance to termites
Susceptible
Moderately durable
Durable
Treatability
Not permeable
Poorly permeable
Moderately permeable
Easily permeable
Stability
Poorly stable
Moderately stable
Stable
Fibers Saturation Point
29
15 %
Low
25 %
Medium
35 %
High
45 %