

## Determa

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Family. Lauraceae

Botanical Name(s).

*Sextonia rubra*

*Ocotea rubra* (synonymous)

Continent. Latin America

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

### Description of logs

Diameter. From 50 to 90 cm

Thickness of sapwood. From 3 to 5 cm

Floats. No

Log durability. Moderate (treatment recommended)

### Description of wood

Colour reference. Light brown

Sapwood. Clearly demarcated

Texture. Medium

Grain. Interlocked

Interlocked grain. Slight

Notes. Light wood with pink to red brown shades. Possible presence of wind shakes.

### 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 <sup>1</sup>	0.66
Monnin hardness <sup>1</sup>	2.5
Coefficient of volumetric shrinkage	0.54 % per %
Total tangential shrinkage (St)	8.8 %
Total radial shrinkage (Sr)	4.5 %
Ratio St/Sr	2.0
Fibre saturation point	29 %
Thermal conductivity ( $\lambda$ )	0.22 W/(m.K)
Lower heating value	19,530 kJ/kg
Crushing strength <sup>1</sup>	51 MPa
Static bending strength <sup>1</sup>	81 MPa
Modulus of elasticity <sup>1</sup>	14,170 MPa

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

### Natural durability and preservation



Flat sawn



Quarter sawn

Resistance to fungi. Class 2 - durable

Resistance to dry wood borers. Class D - durable (sapwood demarcated, risk limited to sapwood)

Resistance to termites. Class D - durable

Treatability. Class 4 - not permeable

Use class ensured by natural durability.

Class 3 - not in ground contact, outside

**Notes.** This species is listed in the European standard NF EN 350 (2016). It naturally covers the use class 5 (wood permanently or regularly submerged in salt water, sea water or 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 (2013), performance length might be modified by the intensity of end-use exposition.

### Requirement of a preservative treatment

Against dry wood borer. Does not require any preservative treatment

In case of temporary humidification. Does not require any preservative treatment

In case of permanent humidification. Use not recommended

### Drying

Drying rate. Slow

Risk of distorsion. Slight risk

Risk of casehardening. Yes

Risk of checking. High risk

Risk of collapse. Yes

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
<b>Prewarm 1</b>		> 50	40	86	17.0
<b>Prewarm 2</b>	4	> 50	43	85	16.5
<b>Drying</b>		> 50	45	83	15.7
		50 - 40	45	80.0	14.6
		40 - 35	45	77.0	13.8
		35 - 30	45	74.0	12.9
		30 - 27	47	69.0	11.5
		27 - 24	49	61.0	9.9
		24 - 21	50	52.0	8.4
		21 - 18	53	48.0	7.7
		18 - 15	56	41.0	6.6
		15 - 12	59	36.0	5.9
		12 - 9	61	30.0	5.0
		9 - 6	65	29.0	4.7
<b>Conditioning</b>	8		58	(3)	(2)
<b>Cooling</b>	(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. Ordinary or alloy steel

Cutting tools. Ordinary

Peeling. Good

Slicing. Good

## Assembling

Nailing and screwing. Poor

Notes. Nails holding is variable.

## Commercial grading

Appearance grading for sawn timbers.

According to NHLA grading rules (2015) Possible grading: FAS, Select, Common 1, Common 2, Common 3 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

Visual grading for structural applications

According to French standard NF B 52-001-1 (2018), strength class D24 can be provided by visual grading.

## Fire safety

Conventional French grading.

Thickness > 14 mm: M3 (moderately inflammable)

Thickness < 14 mm: M4 (easily inflammable)

Euroclasses grading. D-s2, d0

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.

Assigned according to procedures of the European standard EN 13501-1 (décembre 2018).

Relevant European grading report N°RA05-0238E prepared by CSTB.

## End-uses

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

Notes. Drying problems may restrict end-uses.



Privacy fence, Kourou (French Guiana).

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### Main local names

Country	Local name
Brazil	Gamela
Brazil	Louro gamela
Brazil	Louro vermelho
French Guiana	Grignon franc
Guyana	Baaka
Guyana	Determa
Guyana	Red louro
Guyana	Wanu
Suriname	Teteroma
Suriname	Wana
United Kingdom (importated tropical timber)	Determa