

Greenheart

Family. Lauraceae

Botanical Name(s).

Chlorocardium rodiei

Ocotea rodiei (synonymous)

Continent. Latin America

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

Notes. In Surinam, the name GROENHART is also used for IPE squared timber and square edged boards.

Description of logs

Diameter. From 80 to 100 cm

Thickness of sapwood. -

Floats. No

Log durability. Good

Description of wood

Colour reference. Yellow brown

Sapwood. Clearly demarcated

Texture. Fine

Grain. Straight

Interlocked grain. Absent

Notes. Very thick sapwood, heartwood yellow brown to dark olive brown, with sometimes irregular darker veins.

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 ¹	0.97
Monnin hardness ¹	19.8
Coefficient of volumetric shrinkage	0.68 % per %
Total tangential shrinkage (St)	8.2 %
Total radial shrinkage (Sr)	7.5 %
Ratio St/Sr	1.1
Fibre saturation point	23 %
Thermal conductivity (λ)	0.31 W/(m.K)
Lower heating value	20,420 kJ/kg
Crushing strength ¹	98 MPa
Static bending strength ¹	217 MPa
Modulus of elasticity ¹	30,400 MPa

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



Flat sawn



Quarter sawn

Natural durability and preservation

Resistance to fungi. Class 1 - very 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 4 - in ground or fresh water contact

Notes. This species is listed in the European standard NF EN 350 (2016). This species naturally covers the use class 5 (wood permanently or regularly submerged in salt water, sea water or brackish water) due to its high specific gravity and 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. Does not require any preservative treatment

Drying

Drying rate. Slow

Risk of distorsion. Slight risk

Risk of casehardening. No known specific risk

Risk of checking. Slight risk

Risk of collapse. No known specific risk

Notes.

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	40	86	17.0
Prewarm 2	4	> 50	43	85	16.5
Drying		> 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
Conditioning	8		58	(3)	(2)
Cooling	(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. Fairly high

Sawteeth recommended. Stellite-tipped

Cutting tools. Tungsten carbide

Peeling. Not recommended or without interest

Slicing. Not recommended or without interest

Notes. Sawdust may cause allergies.

Assembling

Nailing and screwing. Good but pre-boring necessary

Notes. Very high specific gravity: gluing must be especially performed in compliance with the code of practice.

Commercial grading

Appearance grading for sawn timbers.

According to ATIBT grading rules, possible grade: FAS (First And Second), n°1 Common and select, n°2 Common

Visual grading for structural applications

According to European standard EN 1912 (2012) and associated national standards, strength classes D50 and D70 can be provided by visual grading.

Fire safety

Conventional French grading.

Thickness > 14 mm: M3 (moderately inflammable)

Thickness < 14 mm: M4 (easily inflammable)

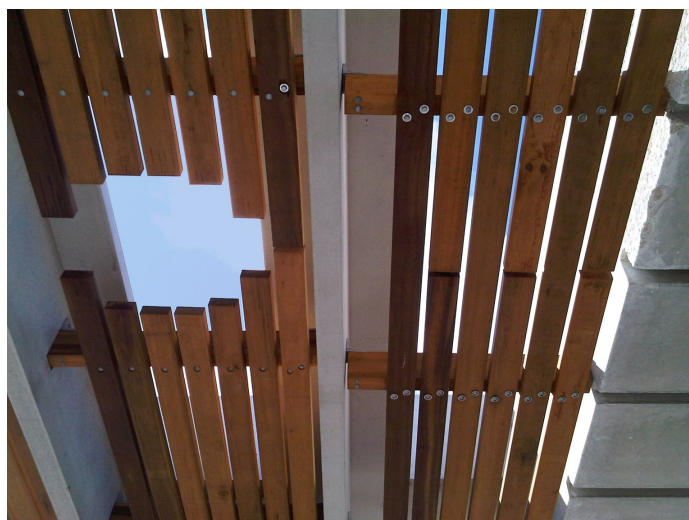
Euroclasses grading. D-s2, d0

Default 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.

End-uses

- Bridges (parts in contact with water or ground)
- Bridges (parts not in contact with water or ground)
- Cooperage
- Decking
- Heavy carpentry
- Hydraulic works (fresh water)
- Hydraulic works (seawater)
- Industrial or heavy flooring
- Poles
- Ship building
- Sleepers
- Turned goods

Notes. Although not very used in France, GREENHEART is one of the most suitable species for end-uses in marine environment. Species resistant to acids. GREENHEART is also used for billiard cue.



Pergola – Made by Woods Direct International LLC, Perez Art Museum, Miami (United States).

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Main local names

Country	Local name
Brazil	Bibiru
Brazil	Itauba branca
Guyana	Bibiru
Guyana	Demerara
Guyana	Greenheart
Suriname	Beeberoe
Suriname	Groenhart
Suriname	Sipiroe
Venezuela	Viruviru