

Family: FABACEAE-CAESALPINIOIDEAE (angiosperm)

Scientific name(s): *Dicorynia guianensis*

*Dicorynia paraensis* (synonymous)

Commercial restriction: no commercial restriction

## WOOD DESCRIPTION

Color: brown  
Sapwood: clearly demarcated  
Texture: medium  
Grain: straight  
Interlocked grain: absent

Note: Colour turns bronze brown or purplish brown with air. Sometimes, presence of internal stresses.

## LOG DESCRIPTION

Diameter: from 50 to 90 cm  
Thickness of sapwood: from 2 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 *:	0,79	0,05
Monnin hardness *:	5,7	0,7
Coeff. of volumetric shrinkage:	0,55 %	0,06 %
Total tangential shrinkage (TS):	8,2 %	0,6 %
Total radial shrinkage (RS):	5,1 %	0,6 %
TS/RS ratio:	1,6	
Fiber saturation point:	29 %	
Stability:	moderately stable	

## MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	70 MPa	3 MPa
Static bending strength *:	121 MPa	46 MPa
Modulus of elasticity *:	18350 MPa	2480 MPa

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

Musical quality factor: 126 measured at 2925 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 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.

Resistance to fungi: moderate to good according to fungi. This species does not cover the use class 4, but it naturally covers the use class 5 (end-uses in marine environment or in brackish water) owing to its high silica content and its high specific gravity. Resistance to termites ranges from moderately good to good.

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: normal to slow	Possible drying schedule: 4			
Risk of distortion: slight risk		Temperature (°C)		
Risk of casehardening: no	M.C. (%)	dry-bulb	wet-bulb	Air humidity (%)
Risk of checking: slight risk	Green	42	39	82
Risk of collapse: no	50	48	43	74
	40	48	43	74
Note: Slow drying recommended in order to reduce risks of checking and distorsion. Risks of casehardening in thick dimension.	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: high
Sawteeth recommended: stellite-tipped
Cutting tools: tungsten carbide
Peeling: good
Slicing: good
Note: Must be sawn green in order to reduce blunting effect. Sawing requires power and a cutting angle of 20° is recommended.

## ASSEMBLING

Nailing / screwing: good but pre-boring necessary
Gluing: correct
Note: Gluing must be done with care (dry wood and smooth surface).

## 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 "ANGELIQUE". 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: Traded timber with CE marking. Possible strength class: D50 related to the European standard EN 14081 (May 2006).

## FIRE SAFETY

Conventional French grading: Thickness > 14 mm : M.3 (moderately inflammable)
Thickness < 14 mm : M.4 (easily inflammable)
Euroclasses grading: C s1 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. Given according to procedures given by European standard NF EN 13501-1 (september 2007). European grading report done by CSTB with the following number : RA05-0238D.

## END-USES

Exterior joinery	Interior joinery
Interior panelling	Industrial or heavy flooring
Flooring	Cabinetwork (high class furniture)
Sliced veneer	Veneer for back or face of plywood
Cooperage	Sculpture
Current furniture or furniture components	Stairs (inside)
Heavy carpentry	Turned goods
Ship building (planking and deck)	Vehicle or container flooring
Resistant to one or several acids	Bridges (parts not in contact with water or ground)
Hydraulic works (seawater)	

## MAIN LOCAL NAMES

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<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Brazil (Amazon)	ANGELICA DO PARA	Brazil (Amazon)	TAPAIUNA
French Guiana	ANGELIQUE	Suriname	BARAKAROEBALLI
Suriname	BASRALOKUS		

