

Family: FABACEAE (angiosperm)

Scientific name(s): Bowdichia nitida

Diploptropis martiusii

Diploptropis purpurea

Commercial restriction: no commercial restriction

## WOOD DESCRIPTION

Color: dark brown  
 Sapwood: clearly demarcated  
 Texture: medium  
 Grain: straight or interlocked  
 Interlocked grain: slight  
 Note: Wood dark brown to reddish brown, with lighter thin veins.

## LOG DESCRIPTION

Diameter: from 40 to 60 cm  
 Thickness of sapwood: from 1 to 2 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 *:	0,91	0,06
Monnin hardness *:	9,4	2,8
Coeff. of volumetric shrinkage:	0,61 %	0,08 %
Total tangential shrinkage (TS):	7,0 %	0,8 %
Total radial shrinkage (RS):	4,9 %	0,8 %
TS/RS ratio:	1,4	
Fiber saturation point:	24 %	
Stability:	moderately stable to poorly stable	

## MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	88 MPa	10 MPa
Static bending strength *:	141 MPa	21 MPa
Modulus of elasticity *:	22300 MPa	3100 MPa
(*: at 12% moisture content, with 1 MPa = 1 N/mm <sup>2</sup> )		
Musical quality factor:	128,6 measured at 2918 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 3 - poorly permeable

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

Species covering the use class 5: No

Note: 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  
 Risk of distortion: slight risk  
 Risk of casehardening: no  
 Risk of checking: slight risk  
 Risk of collapse: no

Possible drying schedule: 4

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

Note: The wood must be dried carefully and slowly to avoid defects. Initial surface drying prior to kiln drying is recommended.

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: not recommended or without interest  
 Slicing: nood  
 Note: Sometimes difficulties due to interlocked grain. Good finish after filling.

## ASSEMBLING

Nailing / screwing: good but pre-boring necessary  
 Gluing: correct (for interior only)

## 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 "COEUR DEHORS". 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  
 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

Sliced veneer	Interior joinery
Interior panelling	Current furniture or furniture components
Cabinetwork (high class furniture)	Stairs (inside)
Flooring	Bridges (parts not in contact with water or ground)
Ship building (planking and deck)	Vehicle or container flooring
Heavy carpentry	Wood frame house
Exterior joinery	Exterior panelling
Turned goods	Wood-ware

Note: Recommended for high class end-uses.

## MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Brazil	CUTIUBA	Brazil	MACANIBA
Brazil	SAPUPIRA	Brazil	SUCUPIRA PRETA
Colombia	ARENILLO	Colombia	ZAPAN NEGRO
Guyana	TATABU	French Guiana	BAAKA KIABICI
French Guiana	COEUR DEHORS	Peru	CHONTAQUIRO
Peru	HUASAI-CASPI	Suriname	ZWARTE KABBES
Venezuela	ALCORNOQUE	Venezuela	CONGRIO

