

Family: MALVACEAE (angiosperm)

Scientific name(s): *Tarrietia densiflora*

Heritiera densiflora (synonymous)

Tarrietia utilis

Heritiera utilis (synonymous)

Commercial restriction: no commercial restriction

Note: Genera *Tarrietia* and *Heritiera* are synonymous.

WOOD DESCRIPTION

Color: red brown

Sapwood: clearly demarcated

Texture: medium

Grain: interlocked

Interlocked grain: slight

Note: Wood pink brown to purplish red brown, becoming bronze with age. Large and visible silver figure. Oily to the touch.

LOG DESCRIPTION

Diameter: from 70 to 90 cm

Thickness of sapwood: from 3 to 4 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 *:	0,70	0,08
Monnin hardness *:	3,8	0,8
Coeff. of volumetric shrinkage:	0,45 %	0,09 %
Total tangential shrinkage (TS):	8,8 %	1,3 %
Total radial shrinkage (RS):	4,2 %	0,9 %
TS/RS ratio:	2,1	
Fiber saturation point:	32 %	
Stability: moderately stable		

Note: *T. utilis* has properties slightly lower than *T. densiflora* which presents sometimes an irregular grain.

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	55 MPa	7 MPa
Static bending strength *:	103 MPa	14 MPa
Modulus of elasticity *:	14430 MPa	1667 MPa

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

Musical quality factor: 113,7 measured at 2756 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 3 - moderately 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 2 - inside or under cover (dampness possible)

Species covering the use class 5: No

Note: This species is listed in the European standard NF EN 350-2.

The NIANGON cannot be used without appropriate preservative treatment for end-uses under use class 3, except for some parts of a work such as windows, less exposed than others (entrance doors, shutters, ...).

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: does not require any preservative treatment

In case of risk of temporary humidification: requires appropriate preservative treatment

In case of risk of permanent humidification: use not recommended

DRYING

Drying rate: rapid to normal	Possible drying schedule: 2			
Risk of distortion: high risk		Temperature (°C)		
Risk of casehardening: no	M.C. (%)	dry-bulb	wet-bulb	Air humidity (%)
Risk of checking: slight risk	Green	50	47	84
Risk of collapse: no	40	50	45	75
Note: High risk of distortion for thin sections with highly interlocked grain; initial surface drying prior to kiln drying is then recommended.	30	55	47	67
	20	70	55	47
	15	75	58	44

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: good
Slicing: good
Note: Risk of clogging and overheating of blades and tools. Risk of tearing in machining. Peeling is not recommended: irregular logs.

ASSEMBLING

Nailing / screwing: good
Gluing: correct

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to SATA grading rules (1996)
 For the "General Purpose Market":
 Possible grading for square edged timbers: choix I, choix II, choix III, choix IV
 Possible grading for short length lumbers: choix I, choix II
 Possible grading for short length rafters: choix I, choix II, choix III
 For the "Special Market":
 Possible grading for strips and small boards (ou battens): choix I, choix II, choix III
 Possible grading for rafters: choix I, choix II, choix III

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

Exterior joinery	Exterior panelling
Interior joinery	Interior panelling
Current furniture or furniture components	Sliced veneer
Veneer for back or face of plywood	Stairs (inside)
Flooring	Moulding
Shingles	Cabinetwork (high class furniture)
Ship building (planking and deck)	Light carpentry
Resistant to one or several acids	

Note: The decorative veneer is sliced. Filling is recommended in order to obtain a good finish.

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Ivory Coast	NIANGON	Gabon	OGOUE
Ghana	NIANGON	Ghana	NYANKOM
Liberia	WHISMORE	Sierra Leone	YAMI

