

## Niangon

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**Family.** Malvaceae

**Botanical Name(s).**

*Heritiera densiflora* (synonymous)

*Tarrietia densiflora*

*Heritiera utilis* (synonymous)

*Tarrietia utilis*

**Continent.** Africa

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

**Notes.** Genera *Tarrietia* and *Heritiera* are synonymous.

### Description of logs

**Diameter.** From 70 to 90 cm

**Thickness of sapwood.** From 3 to 4 cm

**Floats.** No

**Log durability.** Moderate (treatment recommended)

### Description of wood

**Colour reference.** Red brown

**Sapwood.** Clearly demarcated

**Texture.** Medium

**Grain.** Interlocked

**Interlocked grain.** Slight

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

### 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>	0.70
Monnin hardness <sup>1</sup>	3.8
Coefficient of volumetric shrinkage	0.45 % per %
Total tangential shrinkage (St)	8.8 %
Total radial shrinkage (Sr)	4.2 %
Ratio St/Sr	2.1
Fibre saturation point	32 %
Thermal conductivity (λ)	0.23 W/(m.K)
Lower heating value	20,080 kJ/kg
Crushing strength <sup>1</sup>	55 MPa
Static bending strength <sup>1</sup>	103 MPa
Modulus of elasticity <sup>1</sup>	14,430 MPa

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



Quartersawn



Half-quarter sawn

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

### Natural durability and preservation

Resistance to fungi. Class 3 - moderately durable

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

Resistance to termites. Class M - moderately durable

Treatability. Class 4 - not permeable

Use class ensured by natural durability.

Class 2 - inside or under cover (dampness possible)

Notes. This species is listed in the European standard NF EN 350 (2016). 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. Does not require any preservative treatment

In case of temporary humidification. Requires appropriate preservative treatment

In case of permanent humidification. Use not recommended

### Drying

Drying rate. Rapid to normal

Risk of distorsion. High risk

Risk of casehardening. No known specific risk

Risk of checking. Slight risk

Risk of collapse. No known specific risk

Notes. High risk of distortion for thin sections with highly interlocked grain; initial surface drying prior to kiln drying is then recommended.

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
<b>Prewarm 1</b>		> 50	50	86	16.5
<b>Prewarm 2</b>	3	> 50	52	85	16.0
<b>Drying</b>		> 50	55	82	14.7
		50 - 40	55	80.0	13.8
		40 - 35	55	75.0	12.6
		35 - 30	56	73.0	12.0
		30 - 27	58	67.0	10.5
		27 - 24	60	58.0	8.9
		24 - 21	62	50.0	7.5
		21 - 18	64	45.0	6.8
		18 - 15	65	37.0	5.7
		15 - 12	65	34.0	5.3
		12 - 9	65	28.0	4.5
		9 - 6	65	24.0	4.0
<b>Conditioning</b>	6		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.** Fairly high

**Sawteeth recommended.** Stellite-tipped

**Cutting tools.** Tungsten carbide

**Peeling.** Good

**Slicing.** Good

**Notes.** Risk of clogging and overheating of blades and tools. Risk of tearing in machining. Peeling is not recommended: irregular logs.

## Assembling

**Nailing and screwing.** Good

## Commercial grading

**Appearance grading for sawn timbers.**

According to the ATIBT grading rules (2017), the main choices are: FAS (First And Second), n°1 Common and select, n°2 Common (see details of these rules on the ATIBT website).

**Visual grading for structural applications**

According to French standard NF B 52-001-1 (2018), strength class D35 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

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

**Notes.** The decorative veneer is sliced. Filling is recommended in order to obtain a good finish.

## Main local names

Country	Local name
Côte d'Ivoire	Niangon
Gabon	Ogoué
Ghana	Niangon
Ghana	Nyankom
Liberia	Whismore
Sierra Leone	Yami