

Common name:	MANDIOQUEIRA
Family:	VOCHYSIACEAE
Scientific name(s):	Qualea spp. Ruizterania spp.
Note:	Woods of genus Ruizterania may be commercialized under the name MANDIOQUEIRA; only their beige grey colour differentiate them from woods of genus Qualea.

LOG DESCRIPTION	WOOD DESCRIPTION
Diameter:	from 50 to 80 cm
Thickness of sapwood:	from 3 to 6 cm
Floats:	no
Durability in forest :	Moderate (treatment recommended)
Note:	Wood pinkish brown to red brown, sometimes olive brown. Grain sometimes wavy. Unpleasant odour when green.

PHYSICAL PROPERTIES	MECHANICAL PROPERTIES				
Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.					
	mean	standard deviation		mean	standard deviation
Density *:	0.74 g/cm ³	0.07			
Monnin hardness*:	4.7	0.6	Crushing strength *:	69 MPa	10
Coef of volumetric shrinkage:	0.60 %	0.13	Static bending strength *:	103 MPa	19
Total tangential shrinkage:	9.7 %	1.1	Modulus of elasticity *:	19400 MPa	2957
Total radial shrinkage:	5.8 %	1.0			
Fibre saturation point:	31 %				
Stability:	Poorly stable		(* : at 12 % moisture content ; 1 MPa = 1 N/mm ²)		
Note:	European standard EN 14081-1 "Timber structures – Strength graded structural timber with rectangular cross-section" gives the scope of the requirements found in NF B 52001 and applying to timber structures for visual grading of French timbers.				

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.

Fungi:	Class 3 moderately durable	* ensured by natural durability (according EN standards).
Dry wood borers:	Durable; sapwood demarcated (risk limited to sapwood)	
Termites:	Class S - Susceptible	
Treatability:	2 - moderately permeable	
Use class*:	2 - inside or under cover (dampness possible)	

MAIN LOCAL NAMES

Countries	Local names
Bolivia	ARENILLO
Brazil	MANDIOQUEIRA
Brazil	MANDIOQUEIRA ASPERA
Brazil	MANDIOQUEIRA ESCAMOSA
Brazil	MANDIOQUEIRA LISA
French Guiana	GONFOLO
French Guiana	GONFOLO KOUALI
French Guiana	GRONFOLO
Surinam	BERG GRONFOELOE
Surinam	GRONFOELOE
Venezuela	FLORECILLO

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks:	Does not require any preservative treatment
In case of temporary humidification risk:	Requires appropriate preservative treatment
In case of permanent humidification risk:	Use not recommended

DRYING

Possible drying schedule

	Normal High risk No High risk No	Temperature (°C)			Air humidity (%)
		M.C. (%)	dry-bulb	wet-bulb	
Drying rate:	Normal				
Risk of distortion:	High risk				
Risk of casehardening:	No				
Risk of checking:	High risk	Green	42	39	82
Risk of collapse:	No	50	48	43	74
		40	48	43	74
		30	48	43	74
		15	54	46	63

This schedule is given for information only and is applicable to thickness < 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.

Note: Variable risks of distortion according to the species. High humidity recommended during the first stages of drying in order to reduce defects.

SAWING AND MACHINING

Blunting effect:	Normal
Sawteeth recommended:	Ordinary or alloy steel
Cutting tools:	Ordinary
Peeling:	Good
Slicing:	Good
Note:	Some species can be siliceous and present an important blunting effect. In this case, it is necessary to use adequate tools.

ASSEMBLING

Nailing / Screwing:	Good
Gluing:	Correct

END-USES

Main known end-uses; they must to be implemented according to the code of practice.

Important remark: some end-uses are mentionned for information (traditional, regional or ancient end-uses).

- Wood frame house
- Heavy carpentry
- Flooring
- Exterior joinery
- Interior joinery
- Interior panelling
- Exterior panelling
- Current furniture or furniture components
- Sliced veneer
- Ship building (planking and deck)
- Moulding
- Veneer for interior of plywood
- Boxes and crates
- Formwork
- Glued laminated
- Vehicle or container flooring
- Seats
- Open boats
- Tool handles (resilient woods)