Common name:	IROKO
Family:	MORACEAE
Scientific name(s):	Milicia excelsa Milicia regia

LOG DESCRIPTION

Diameter:	from 80 to 100 cm
Thickness of sapwood:	from 5 to 10 cm
Floats:	no
Durability in forest :	Moderate (treatment recommended)
Note:	Yellow brown to more or less brown with golden glints. Ribbon like aspect on quartersawn, darker veins on slab. Possible presence of very hard white calcium carbonate deposits, sometimes surrounded by a darker colour.

WOOD DESCRIPTION

Colour:	Yellow brown
Sapwood:	Clearly demarcated
Texture:	Coarse
Grain:	Interlocked
Interlocked grain:	Slight

PHYSICAL 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
Density *:	0.64 g/cm3	0.06
Monnin hardness*:	4.1	0.9
Coef of volumetric shrinkage:	0.44 %	0.07
Total tangential shrinkage:	5.4 %	0.7
Total radial shrinkage:	3.5 %	0.4
Fibre saturation point:	23 %	
Stability:	Moderately stable	

MECHANICAL PROPERTIES

	mean	standard deviation
Crushing strength *:	54 MPa	6
Static bending strength *:	87 MPa	15
Modulus of elasticity *:	12840 MPa	2496

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

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 1-2 very durable to durable
Dry wood borers:	Durable; sapwood demarcated (risk limited to sapwood)
Termites:	Class D - Durable
Treatability:	4 - not permeable
Biological hazard class*:	3 - not in ground contact, outside exposed
Note:	This species is listed in the European standard NF EN 350-2. The heartwood does not cover the biological hazard class 4 required for end-uses in contact with permanent humidity (example: contact with ground). On the other hand, if the constructive system is well-drained, without water trap, this species can be used outside without any treatment. Heartwood is hardly permeable to preservative products.

* ensured by natural durability (according EN standards).

COUNTRIES - LOCAL NAMES

Countries	Local names
Angola	MOREIRA
Benin	LOKOTIN
Cameroon	ABANG
Congo	KAMBALA
Côte d'Ivoire	IROKO
Dem Rep of Congo	KAMBALA
Dem Rep of Congo	LUSANGA
Dem Rep of Congo	MOKONGO
Dem Rep of Congo	MOLOUNDOU
Equatorial Guinea	ABANG
Gabon	ABANG
Gabon	MANDJI
Ghana	ODOUM
Guinea	SIMME
Liberia	SEMLI
Mozambique	MUFULA
Mozambique	TULE
Nigeria	ROKKO
Sierra Leone	SEMLI
Belgium	KAMBALA

IROKO

REQUIREMENT OF A PRESERVATIVE TREATMENT

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

DRYING

Drying rate:	Normal
Risk of distortion:	Slight risk
Risk of casehardening:	No
Risk of checking:	No risk or very slight risk
Risk of collapse:	No

Possible drying schedule

M.C. (%)	Temperature (°C) dry-bulb	wet-bulb	Air humidity (%)
Green	50	47	84
40	50	45	75
30	55	47	67
20	70	55	47
15	75	58	44

This shedule 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: Spacer sticks often leave marks. A vertical surface drying is recommended before stacking.

SAWING AND MACHINING

Blunting effect:	Fairly high
Sawteeth recommended:	Stellite-tipped
Cutting tools:	Tungsten carbide
Peeling:	Good
Slicing:	Good
Note:	The calcium carbonate deposits in some logs severely damage tools. Very irritant sawdust. Risks of tearing (irregular grain).

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).

Note: Filling recommended. Wood sometimes resistant to wood finish product: IROKO contains a non-saturated phenolic compound, the chlorophorin, which is a powerful anti-oxidant. It is then necessary to use paints or varnishes without free siccative oil, it is to say, synthetic resin based paints or varnishes such as vynilic paints or polyurethane varnishes that can also be used as undercoat.

Exterior joinery
Interior joinery
Flooring
Sliced veneer
Ship building (planking and deck)
Interior panelling
Cabinetwork (high class furniture)
Turned goods
Current furniture or furniture components
Light carpentry
Cooperage
Glued laminated
Stairs (inside)
Veneer for interior of plywood
Veneer for back or face of plywood
Vehicle or container flooring
Bridges (parts not in contact with water or ground)