Common name:	AZOBE
Family:	OCHNACEAE
Scientific name(s):	Lophira alata Lophira procera (synonymous)

LOG DESCRIPTION

Diameter:	from 60 to 100 cm
Thickness of sapwood:	from 2 to 4 cm
Floats:	no
Durability in forest :	Good

WOOD DESCRIPTION

Colour:	Dark red
Sapwood:	Clearly demarcated
Texture:	Coarse
Grain:	Interlocked
Interlocked grain:	Marked

Note: Dark red to purple brown wood. Intermediate zone between sapwood and heartwood. White deposits in the pores.

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 *:	1.06 g/cm3	0.04
Monnin hardness*:	10.7	2.7
Coef of volumetric shrinkage:	0.69 %	0.01
Total tangential shrinkage:	10.3 %	0.9
Total radial shrinkage:	7.3 %	1.0
Fibre saturation point:	28 %	
Stability:	Poorly stable	

MECHANICAL PROPERTIES

	mean	standard deviation
Crushing strength *:	96 MPa	9
Static bending strength *:	162 MPa	21
Modulus of elasticity *:	21420 MPa	3539

(* : 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 2 - durable
Dry wood borers:	Durable; sapwood demarcated (risk limited to sapwood)
Termites:	Class D - Durable
Treatability:	4 - not permeable
Biological hazard class*:	4 - in ground or fresh water contact or hight dampness
Note:	This species is listed in the European standard NF EN 350-2. Transitional wood has a variable durability. Good resistance to marine borers in temperate water but moderate resistance in tropical water. This species is thus considerated as "moderately durable" towards marine borers and covers the biological hazard 5 only when used in temperate or cold marine environment.

* ensured by natural durability (according EN standards).

COUNTRIES - LOCAL NAMES

Countries	Local names
Benin	EKI
Congo	BONKOLE
Côte d'Ivoire	AZOBE
Equatorial Guinea	AKOGA
Gabon	AKOGA
Ghana	KAKU
Nigeria	EBA
Nigeria	EKKI
Sierra Leone	HENDUI
Germany	BONGOSSI
Germany	BONKOLE
United Kingdom	EKKI

AZOBE

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:	Slow
Risk of distortion:	High risk
Risk of casehardening:	No
Risk of checking:	High risk
Risk of collapse:	No

Possible drying schedule

M.C. (%)	Temperature (°C) dry-bulb	wet-bulb	Air humidity (%)
Green	40	37	82
40	44	38	68
30	44	36	59
20	46	36	52
15	49	37	46

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: Surface drying period recommended (3 to 4 months) (under shelter) prior to kiln drying. Drying very difficult for thickness > 38 mm.

SAWING AND MACHINING

Blunting effect:	Fairly high
Sawteeth recommended:	Stellite-tipped
Cutting tools:	Tungsten carbide
Peeling:	Not recommended or without interest
Slicing:	Not recommended or without interest
Note:	Requires power. Log turning sawing recommended (internal stresses). Some difficulties in planing due to interlocked grain.

ASSEMBLING

Nailing / Screwing:	Good but pre-boring necessary
Gluing:	Correct (for interior only)
Note:	Variable gluing properties. Gluing must be done carefully (dry wood and smooth surface) as the wood is very dense.

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: For end-uses under permanent humidification, transition wood must be eliminated.

Hydraulic works (fresh water)
Sleepers
Bridges (parts in contact with water or ground)
Industrial or heavy flooring
Vehicle or container flooring
Stairs (inside)
Heavy carpentry
Bridges (parts not in contact with water or ground)
Wood frame house
Cooperage
Posts
Stakes
Resistant to one or several acids
Hydraulic works (seawater)