

Frake



Scientific Name(s)

Terminalia superba

Family

COMBRETACEAE (angiosperm)

Commercial Restriction

No commercial restriction

Frake is a light to medium density hardwood commonly found in West and Central Africa. It is highly valued for its versatility and ease of use in various woodworking applications.

Frake wood typically has a pale yellow to light brown colour, often with subtle variations and a fine, even texture. The grain is usually straight or slightly interlocked, giving it a uniform appearance. The wood has a relatively uniform structure, making it relatively easy to work with using both hand and machine tools. One of the notable characteristics of Frake wood is its lightness. It has a low to medium density, making it easy to handle and transport. Despite its light weight, Frake wood still offers reasonable strength and stability, making it suitable for a wide range of projects. Frake wood is known for its excellent workability.

It cuts smoothly, sands easily, and accepts finishes and paints well. It can be machined and shaped with relative ease, making it a popular choice for applications such as cabinetry, furniture, interior trim, and millwork.

While Frake wood is not particularly durable or resistant to decay, it can be successfully used indoors or in protected applications. It is commonly used for interior projects where its light colour and smooth surface can contribute to a bright and airy aesthetic.

Your natural resistance can be improved through Thermally modified process. The thermal modification process alters the wood's cellular structure, reducing its moisture content and increasing its dimensional stability. Themo Frake exhibits improved resistance to shrinking, warping, and cupping, making it highly suitable for outdoor applications where moisture and weathering are concerns.

Wood Description

Color: light yellow

Sapwood: not demarcated

Texture: medium

Grain: straight or interlocked

Interlocked grain: slight

Note: Sometimes brittleheart. Some logs have a black greyish heartwood, more or less veined.

Log Description

Diameter: from 60 to 100cm

Floats: yes

Log durability: low (must be treated)



Physical, Mechanical and Acoustic Properties

Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.

Stability: moderately stable

Musical quality factor: 115,6 measured at 2740 Hz

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

	Mean	Std dev.
Specific gravity *:	0,54	0,07
Monnin hardness *:	2,4	0,9
Coeff. of volumetric shrinkage:	0,42%	0,07%
Total tangential shrinkage (TS):	6,10%	0,90%
Total radial shrinkage (RS):	4,30%	1,10%
TS/RS ratio:	1,4	-
Fiber saturation point:	28%	-
Crushing strength *:	47MPa	8MPa
Static bending strength *:	80MPa	16MPa
Modulus of elasticity *:	11750MPa	2480MPa

Requirement of a Preservative Treatment

Against dry wood borer attacks: requires appropriate preservative treatment

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

In case of risk of permanent humidification: use not recommended

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 4

- poorly durable

Dry wood borers: susceptible - sapwood not or slightly demarcated (risk in all the wood)

Termites (according to E.N. standards): class S

- susceptible

Treatability (according to E.N. standards): class 2

- moderately permeable

Use class ensured by natural durability: class 1

- inside (no dampness)

Species covering the use class 5: no

Note: This species is listed in the European standard NF EN 350-2. Preservative treatment is sometimes difficult due to a variable permeability (low to good).

Drying

Drying rate: rapid to normal

Risk of distortion: no risk or very slight risk

Risk of casehardening: no

Risk of checking: no risk or very slight risk

Risk of collapse: no

Possible drying schedule: 3

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.

M.C. (%)	Temperature (°C)		
	Dry-bulb	Wet-bulb	Air humidity (%)
Green	60	56	81
30	68	58	61
20	74	60	51
15	80	61	41

Sawing And Machining

Blunting effect: normal

Sawteeth recommended: ordinary or alloy steel

Cutting tools: ordinary

Peeling: good

Slicing: good

Note: Internal stresses in some logs (usually timbers from plantation). Sometimes, blunting effect quite high.

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

End-uses

- Veneer for interior of plywood
- Blockboard
- Seats
- Interior panelling
- Light carpentry
- Wood frame house
- Fiber or particle boards
- Sliced veneer
- Veneer for back or face of plywood
- Current furniture or furniture components
- Interior joinery
- Moulding
- Glued laminated
- Boxes and crates
- Wood-ware

Note: Sawdust may cause allergic reactions during machining.

Assembling

Nailing / screwing: good

Gluing: correct

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.

Main Local Names

Country	Local Name
Benin	Azinii
Congo	Limba
Gabon	Akom
Equatorial Guinea	Akom
Nigeria	White Afara
Democratic Republic of the Congo	Limba
France	Frake
France	Noyer du Mayombe
Cameroon	Akom
Ivory Coast	Frake
Ghana	Ofram
Nigeria	Afara
Central African Republic	N'Ganga
Sierra Leona	Kojagei
Frane	Limbo
United States of America	Korina