

Family: MELIACEAE (angiosperm)

Scientific name(s): Cedrela odorata

Cedrela fissilis

Commercial restriction: species mentioned in Appendix III (see note)

Note: Wood of the Cedrela odorata species, coming from Colombia, Guatemala and Peru, are listed in CITES (Convention on International Trade in Endangered Species of wild fauna and flora), appendix 3 and in the European Union Regulation, appendix C. Parts of wood and wood-made products which are regulated are defined by a note: all parts and products. To trade these parts and products, the exporting or re-exporting country must emit a CITES permit or certificate and an importation notification is compulsory to import within the EU.

WOOD DESCRIPTION

Color: brown
Sapwood: clearly demarcated
Texture: medium
Grain: straight
Interlocked grain: absent

Note: Distinctive cedar scent. Sporadic or sometimes important resin stains. Colour variable, pink to red brown.

LOG DESCRIPTION

Diameter: from 60 to 120 cm
Thickness of sapwood: from 3 to 5 cm
Floats: yes
Log durability: moderate (treatment recommended)

PHYSICAL PROPERTIES

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

	<u>Mean</u>	<u>Std dev.</u>
Specific gravity *:	0,46	0,05
Monnin hardness *:	1,6	0,4
Coeff. of volumetric shrinkage:	0,38 %	0,05 %
Total tangential shrinkage (TS):	6,0 %	0,6 %
Total radial shrinkage (RS):	3,9 %	0,8 %
TS/RS ratio:	1,5	
Fiber saturation point:	29 %	
Stability: stable		

Note: Specific gravity varies according to origins.

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	38 MPa	6 MPa
Static bending strength *:	62 MPa	12 MPa
Modulus of elasticity *:	9210 MPa	1753 MPa

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

Musical quality factor: 112,4 measured at 2925 Hz

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 2 - durable

Dry wood borers: durable - sapwood demarcated (risk limited to sapwood)

Termites (according to E.N. standards): class M - moderately durable

Treatability (according to E.N. standards): class 3-4 - poorly or not permeable

Use class ensured by natural durability: class 3 - not in ground contact, outside

Species covering the use class 5: No

Note: The specie C. odorata is listed in the European standard NF EN 350-2.

Part of the CEDRO commercialized today in the world comes from young plantations often constituted by woods with lower properties than the woods from natural forests. These juvenile woods especially present an incomplete duraminisation which explains their lower natural durability compared to the durability of more mature woods. According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: does not require any preservative treatment

In case of risk of temporary humidification: does not require any preservative treatment

In case of risk of permanent humidification: use not recommended

DRYING

Drying rate: rapid

Risk of distortion: slight risk

Risk of casehardening: no

Risk of checking: slight risk

Risk of collapse: yes

Note: Light wood must be dried at low temperature in order to avoid risks of collapse.

Possible drying schedule: 2

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

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.

SAWING AND MACHINING

Blunting effect: normal

Sawteeth recommended: ordinary or alloy steel

Cutting tools: ordinary

Peeling: good

Slicing: good

Note: The presence of resin may cause the clogging of saw blades. Surface sometimes fuzzy.

ASSEMBLING

Nailing / screwing: poor

Gluing: correct

Note: Gluing must be done with care due to resin exudations.

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to NHLA grading rules (January 2007)

Possible grading: FAS, Select, Common 1, Common 2, Common 3

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.

END-USES

Veneer for back or face of plywood

Interior joinery

Cigar boxes

Current furniture or furniture components

Glued laminated

Exterior joinery

Ship building (planking and deck)

Fiber or particle boards

Moulding

Formwork

Seats

Sliced veneer

Interior panelling

Cabinetwork (high class furniture)

Light carpentry

Wood frame house

Boxes and crates

Musical instruments

Shingles

Sculpture

Wood-ware

Note: Mentionned end-uses depend on the specific gravity and on the importance of resin (especially for furniture and interior joinery).

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>
Brazil	CEDRO
French Guiana	CEDRO
Suriname	CEDER

<u>Country</u>	<u>Local name</u>
French Guiana	CEDRAT
Honduras	CIGARBOX

