

Family: SAPINDACEAE (angiosperm)

Scientific name(s): Acer pseudoplatanus

Commercial restriction: no commercial restriction

Note: This species from Western and Central Europe is present in France until approximately an altitude of 1500 meters.

WOOD DESCRIPTION

Color: white
Sapwood: not demarcated
Texture: fine
Grain: straight
Interlocked grain: absent

Note: White wood with slight yellowish shades and sometimes veins or greenish stains. The silver figure is well visible. Woods with wavy grain (wavy sycamore) are very sought-after for stringed-instrument making.

LOG DESCRIPTION

Diameter: from 30 to 100 cm
Thickness of sapwood:
Floats: pointless
Log durability: low (must be treated)

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 *:	0,64	
Monnin hardness *:	4,7	
Coeff. of volumetric shrinkage:	0,50 %	
Total tangential shrinkage (TS):	7,8 %	
Total radial shrinkage (RS):	4,5 %	
TS/RS ratio:	1,7	
Fiber saturation point:		
Stability:	poorly stable	

MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	55 MPa	
Static bending strength *:	100 MPa	
Modulus of elasticity *:	13000 MPa	

(*: at 12% moisture content, with 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.
E.N. = Euro Norm

Funghi (according to E.N. standards): class 5 - not 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 1 - easily 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.

Only sapwood is sensitive to dry wood borers attacks but it is not separate and wood is used with sapwood. Hence wood must have a preservative treatment.

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

DRYING

Drying rate: normal

Risk of distortion: high risk

Risk of casehardening: no

Risk of checking: high risk

Risk of collapse: no

Note: Artificial drying may stain the wood. To minimize that effect, one must not use a dry temperature over 40 to 45°C.

Possible drying schedule: 6

M.C. (%)	Temperature (°C)		Air humidity (%)
	dry-bulb	wet-bulb	
Green	42	41	94
50	48	43	74
30	54	46	63
20	60	51	62
15	60	51	62

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: stellite-tipped

Cutting tools: tungsten carbide

Peeling: good

Slicing: good

Note: Sawing and planing may be difficult because of the presence of irregular grain (wavy sycamore). In this case it is recommended to reduce the feed rate and the cutting angle.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary

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.

END-USES

Cabinetwork (high class furniture)

Interior joinery

Stringed instrument (back and case)

Turned goods

Wood-ware

Sliced veneer

Musical instruments

Flooring

Arched goods

MAIN LOCAL NAMES

<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Germany (temperate timber)	BERGAHORN	Spain (temperate timber)	ARCE BLANCO
France (temperate timber)	ERABLE BLANC	France (temperate timber)	SYCOMORE
Italia (temperate timber)	ACERO BIANCO	Italia (temperate timber)	SICOMORO
United Kingdom (temperate timber)	GREAT MAPLE	United Kingdom (temperate timber)	HAREWOOD
United Kingdom (temperate timber)	SYCAMORE		

