

Family: JUGLANDACEAE (angiosperm)

Scientific name(s): Juglans regia

Commercial restriction: no commercial restriction

## WOOD DESCRIPTION

Color: brown  
Sapwood: not clearly demarcated  
Texture: medium  
Grain: straight  
Interlocked grain: absent

Note: Brown heartwood more or less yellow brown or pinkish brown, sometimes greyish, often with darker veins. Straight to wavy grain.

## LOG DESCRIPTION

Diameter: from 30 to 80 cm  
Thickness of sapwood: from 2 to 5 cm  
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 *:	0,66	
Monnin hardness *:	3,2	
Coeff. of volumetric shrinkage:	0,37 %	
Total tangential shrinkage (TS):	7,5 %	
Total radial shrinkage (RS):	5,5 %	
TS/RS ratio:	1,4	
Fiber saturation point:		
Stability: stable		

## MECHANICAL AND ACOUSTIC PROPERTIES

	<u>Mean</u>	<u>Std dev.</u>
Crushing strength *:	64 MPa	
Static bending strength *:	117 MPa	
Modulus of elasticity *:	11800 MPa	
(*: at 12% moisture content, with 1 MPa = 1 N/mm <sup>2</sup> )		
Musical quality factor:	90,9	measured at 2003 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 3 - moderately durable

Dry wood borers: heartwood durable but sapwood not clearly demarcated

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

Treatability (according to E.N. standards): class 3 - poorly permeable

Use class ensured by natural durability: class 2 - inside or under cover (dampness possible)

Species covering the use class 5: No

Note: This species is listed in the European standard NF EN 350-2.  
WILD NUT sapwood is permeable to preservative products.

## REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: does not require any 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 to slow

Risk of distortion: slight risk

Risk of casehardening: no

Risk of checking: slight risk

Risk of collapse: yes

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

**ASSEMBLING**

Nailing / screwing: good

Gluing: correct

**FIRE SAFETY**

Conventional French grading: Thickness &gt; 14 mm : M.3 (moderately inflammable)

Thickness &lt; 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)

Sliced veneer

Sculpture

Turned goods

Wood-ware

Interior joinery

Note: WILD NUT is characterised by a good dimensional stability and a great transverse cohesion. It is much sought-after for the manufacturing of top-of-the-range hunting gun butt.

## MAIN LOCAL NAMES

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<u>Country</u>	<u>Local name</u>	<u>Country</u>	<u>Local name</u>
Germany (temperate timber)	NUSSBAUM	Germany (temperate timber)	WALNUSS
Spain (temperate timber)	NOGAL	France (temperate timber)	NOYER
Italia (temperate timber)	NOCE COMMUNE	United Kingdom (temperate timber)	EUROPEAN WALNUT
United Kingdom (temperate timber)	WALNUT		

