

PERUVIAN WALNUT (NOGAL)



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: 11.8 – 31.5 inches
Thickness of sapwood: 0.88 - 2 inches
Floats:
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>
Specific Gravity*:	0.66
Janka Hardness (lbs):	960
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/ACOUSTIC

	<u>Mean</u>
Crushing Strength*:	9,282 lbf
Static Bending Strength*:	16,969 lbf
Modulus of Elasticity*:	1,711,445 lbf
Musical Quality Factor:	90.9 measured at 2003 Hz

**At 12% moisture content.*

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:	Class D – durable (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

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DRYING

Drying Rate: normal to slow
Risk of Distortion: slight risk
Risk of Casehardening: no
Risk of Checking: slight risk
Risk of Collapse: yes

M.C. (%)	Dry-Bulb	Wet-Bulb	Air Humidity (%)
Green	122	116.6	84
40	122	113	75
30	131	116.6	67
20	158	131	47
15	167	136.4	44

Temperature (°F)

This schedule is given for information only and is applicable to thickness lower or equal to 1.5 in. It must be used in compliance with the code of practice. For thickness from 1.5 to 3 in, the air relative humidity should be increased by 5% at each step. For thickness over 3 in, 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

END-USES

Cabinetwork
Sculpture
Woodware
Sliced veneer
Turned goods
Interior joinery

Note: WILD NUT is characterized 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.

Works Cited:

CIRAD'S *Biomass, Wood, Energy, Bioproducts Research Unit (BioWooEB)*
Meier, E. (2015), Wood, United States of America

MAIN LOCAL NAMES

Country

Germany
Spain
Italy
United Kingdom
France

Local Name

Nussbaum, Walnuss
Nogal
Noce Commune
Walnut, European Walnut
Noyer