

# GONÇALO-ALVEZ (TIGERWOOD)



**Family:** ANACARDIACEAE (angiosperm)  
**Scientific name(s):** *Astronium balansae*  
*Astronium fraxinifolium*  
*Astronium graveolens*  
*Astronium lecointei*  
*Astronium urundeuva*  
**Commercial restriction:** No commercial restriction.

## WOOD DESCRIPTION

**Color:** dark brown  
**Sapwood:** clearly demarcated  
**Texture:** fine  
**Grain:** straight or interlocked  
**Interlocked Grain:** slight

**Note:**

Pinkish brown to yellow brown, becoming red brown to dark brown, with very irregularly spaced black brown veins.

## LOG DESCRIPTION

**Diameter:** 23 – 31 inches  
**Thickness of Sapwood:** 1.5 – 4 inches  
**Floats:** no  
**Log Durability:** good

## 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>
<b>Specific Gravity*:</b>	0.80
<b>Janka Hardness (lbs):</b>	2,170
<b>Volumetric Shrinkage:</b>	0.56%
<b>Total Tangential Shrinkage (TS):</b>	7.9%
<b>Total Radial Shrinkage (RS):</b>	4.3%
<b>TS/RS Ratio:</b>	1.8
<b>Fiber Saturation Point:</b>	22%
<b>Stability:</b> Poorly stable	

## MECHANICAL/ACOUSTIC

	<u>Mean</u>
<b>Crushing Strength*:</b>	11,022 lbf
<b>Static Bending Strength*:</b>	13,924 lbf
<b>Modulus of Elasticity*:</b>	2,393,123 lbf

*\*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

<b>Funghi (According to E.N. standards):</b>	class 1 - very durable to durable
<b>Dry Wood Borers:</b>	class D - durable (sapwood demarcated, risk limited to sapwood)
<b>Termites (According to E.N. standards):</b>	class D - durable
<b>Treatability (according to E.N. standards):</b>	class 4 - not permeable
<b>Use class ensured by natural durability:</b>	class 4 - in ground or fresh water contact
<b>Species covering the use class 5:</b>	no

**Note:**

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:** does not require any preservative treatment

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## DRYING

**Drying Rate:** normal  
**Risk of Distortion:** slight risk  
**Risk of Casehardening:** no  
**Risk of Checking:** slight risk  
**Risk of Collapse:** no  
**Possible Drying Schedule:** 5

M.C. (%)	Temperature (°F)		
	Dry-Bulb	Wet-Bulb	Air Humidity (%)
30	107.6	105.8	94
25	107.6	102.2	82
20	118.4	109.4	74
15	118.4	109.4	74

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:** fairly high  
**Sawteeth Recommended:** stellite-tipped  
**Cutting Tools:** tungsten carbide  
**Peeling:** not recommended or without interest  
**Slicing:** good

**Note:**

Risks of burning in machining. Slight tendency to tearing in planing (interlocked grain). Sawdust reported to be irritant.

## ASSEMBLING

**Nailing / screwing:** good but pre-boring necessary  
**Gluing:** poor

## END-USES

**Cabinetwork (High Class Furniture)**  
**Sliced Veneer**  
**Flooring**  
**Wood-ware**  
**Turned Goods**  
**Exterior Joinery**  
**Interior Joinery**  
**Interior Paneling**  
**Heavy Carpentry**  
**Musical instruments**  
**Tool Handles (Resilient Woods)**  
**Sculpture**

## MAIN LOCAL NAMES

<u>Country</u>	<u>Local Name</u>
<b>Brazil</b>	Aderno-Preto, Baracatiara, Goncaleiro, Goncalo-Alvez, Guaribu-Preto, Guarita, Mirueira, Muiracatiara, Sanguessugueira
<b>Colombia</b>	Gusanero
<b>Ecuador</b>	Guasango
<b>Mexico</b>	Palo De Culebra
<b>Paraguay</b>	Urunday-Para
<b>Venezuela</b>	Gateado