



JATOBA

Botanical name:

Hymenaea courbaril

Trade names:

Hymenaea intermedia, Hymenaea oblongifolia, Hymenaea davisii, Hymenaea parvifolia, Hymenaea martiana.

Location of occurrence:

Tropical and subtropical forests of Latin America. Its natural range extends from southern Mexico through Central America (Guatemala, Honduras, Costa Rica, Panama) to vast areas of South America. It is found mainly in the Amazon, in northern and central Brazil, as well as in Bolivia, Peru, Venezuela, Colombia, Guyana, Suriname, and as far south as northern Argentina and Paraguay.

General description of the wood:

The heartwood is reddish-brown, with fine to moderately pronounced veining in shades ranging from purplish-brown to orange-brown and dark reddish-brown. The sapwood is clearly distinct, whitish to yellowish. The texture is medium, and the grain is straight or slightly interlocked. When being worked, the wood is known for causing higher tool dulling.

NATURAL DURABILITY INDEX						
1	2	3	4	5	6	7
1 = VERY HIGH DURABILITY			7 = LOW DURABILITY			

The heartwood is moderately durable against wood-decaying fungi.

Wood properties:

Density (at W = 12%)	940 kg/m ³
Heavy to very heavy wood	
Shrinkage - radial	3,9 %
Shrinkage - tangential	7,5 %
Total volumetric shrinkage	11,4 %
Moderate dimensional changes, with a pronounced difference between tangential and radial shrinkage	
Monnin hardness (at W = 12%, radial direction)	10,5
Very soft	0-1,5
Soft	1,6-3
Medium hard	3,1-6
Hard	6,1-9
Very hard	<9,1
Bending strength (perpendicular to grain, tangential and radial)	160 MPa
Compressive strength (parallel to grain)	97 MPa

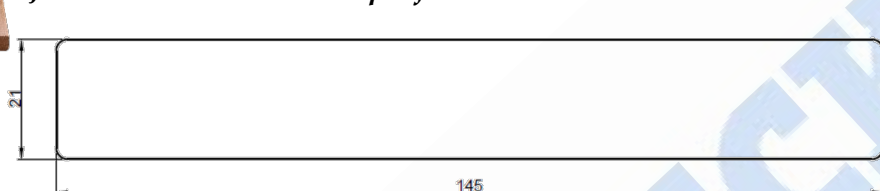
JATOBA decking boards

DIMENSIONS (mm)	LENGTHS (m)	GRADING	DRYING	FACE SIDE
21 x 145	1,2 - 6,1 *	A/B	16-18 %	smooth

*Stocked lengths are multiples of 30 cm = 2.1 m, 2.4 m, 2.7 m, 3.0 m, 3.3 m, 3.6 m, 3.9 m, 4.2 m, 4.5 m, 4.8 m, 5.1 m, 5.4 m, 5.7 m, 6.1 m.



JATOBA 21 x 145 mm - profile detail



Grading:

Jatoba decking boards are supplied in A/B grading at a 60:40 ratio. In practice, this means that on sixty percent of the delivered material there are no visible defects on the face side of the boards at the time of delivery, and each board can generally be divided into a maximum of two usable pieces during installation. The remaining forty percent may show fine surface checks and end cracks; however, these must not run through the full thickness of the board and may extend to a maximum of one-third of the board's length. End cracks are permitted up to a length equal to the board's width. Sound, intergrown knots are allowed without limitation. Local occurrence of insect holes is acceptable (*only larval tunnels Ø 1-2 mm; all insects are dead due to kiln drying and insecticide treatment prior to transport*). Resin pockets are also permitted.

Drying:

Wood is a hygroscopic material that absorbs and releases moisture depending on its surrounding environment through adsorption, seeking to reach a state of equilibrium. Jatoba decking boards are kiln-dried to a moisture content of 16-18 %, which minimises the risk of undesirable dimensional changes, significantly increases mechanical properties, and dramatically improves resistance to biological attack.

However, shape changes caused by shrinkage and swelling can never be eliminated entirely. Due to the anisotropic nature of shrinkage and swelling, and the resulting internal stresses within the wood, transverse and longitudinal warping, as well as the formation of drying cracks, may occur.



TECHNICAL INFORMATION

Face Side:

Each decking board profile has a predefined face side to which the grading applies. The use of the opposite side as the face side is not permitted. The designated face side must be specified when placing an order.

21 x 145 mm face side = smooth side

Board Deviations and Expansion Gaps:

Due to the hygroscopic and anisotropic nature of wood, slight longitudinal deformation (curvature) of decking boards may occur.

These dimensional changes are not considered a material defect and do not prevent installation. To minimise deformation, the boards must be stored tightly strapped together until they are installed. For easier installation of curved boards, special clamping tools can be used. Because wood swells and shrinks in response to weather conditions, a minimum expansion gap of **8 mm** must be left between individual decking boards. The width of this expansion gap will vary throughout the year as the boards expand and contract with weather changes. The primary function of the expansion gap is to allow the boards to move freely without risk of damage.

Colour Range:

Jatoba decking boards are not sorted by colour. The heartwood colour ranges from orange-brown through purplish-brown to deep reddish-brown, often with fine veining or darker streaks. The sapwood is always clearly distinct, whitish to yellowish. Over time, the heartwood naturally darkens to deeper shades of brown. Depending on the angle of light, different colour tones and contrasts between lighter and darker areas may appear.

Extractive Substances:

Jatoba wood contains a higher amount of extractives (tannins and resins), which, when exposed to weather, can leach out and cause colour stains on the surface of the wood and surrounding structures. These substances range in colour from reddish-brown to dark shades. During installation, it is therefore important to ensure proper drainage of rainwater and provide adequate structural protection to minimise the risk of staining adjacent surfaces.



TECHNICAL INFORMATION

Wood Greying:

From the moment Jatoba decking boards are exposed to the elements, they begin to degrade under the influence of so-called *abiotic* factors.

The combined action of water, sunlight, air movement, temperature changes, smog, and emissions initiates a photochemical breakdown of lignin. This process does not cause visible darkening of the wood outdoors because the degraded lignin is washed away by rainwater, leaving a lighter shade caused by the naturally light colour of unaltered cellulose. In practice, however, this lightening is disrupted as dust particles and airborne impurities settle into the porous wood surface, often accompanied by the growth of microscopic fungi, resulting in the well-known greying of wood.

Wood-Metal Reaction:

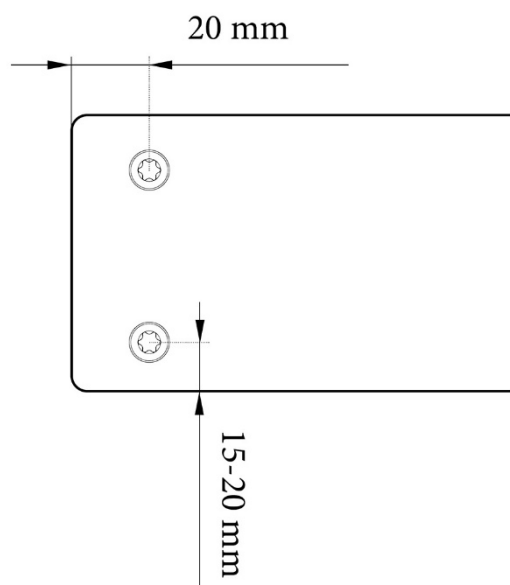
Metal particles or metallic dust react quickly with excessive moisture, creating black stains on the wood surface in a very short time. The wood surface must always be thoroughly cleaned of any metal dust from cutting, sanding, or screw burrs during or after installation (e.g., by carefully sweeping or vacuuming the entire deck surface). For installation, always use only the recommended fasteners listed below. If black stains appear on the wood surface during or immediately after installation, they can be removed using **Osmo Wood Reviver Power Gel 6609** (follow the product's technical data sheet). Suppose the stains are left untreated for an extended period; the reaction will penetrate deeper into the wood structure, and complete removal will no longer be possible. In that case, only partial improvement can be achieved.

Choice of Fasteners:

Jatoba decking boards are moderately stable and can be installed using either visible screws or hidden fastening systems. Only materials that do not cause chemical reactions with the wood should be used to prevent damage to the wood. For visible fastening, use stainless steel screws of at least **A4 grade**, or composite materials that meet the required strength for hidden fastening systems.

Recommended Fasteners:

DECKING BOARD	STEEL GRADE	SCREW SIZE	INVISIBLE FASTENING
JATOBA 21 x 145 mm	A4	5x 55 mm / 5,5x50 mm	YES



Screw Positioning:

Position the screws as close as possible to the edges of the board to minimise the risk of cupping.

The recommended distance is 15–20 mm from the edge of the decking boards.

At butt joints, position the screws at least 20 mm from the end of the board.

Substructure:

Decking boards may only be installed on a substructure made of solid wood from a single piece, available in lengths of **1830–4880 mm**, with equal or higher biological durability and a minimum profile of **45 x 70 mm** (e.g., exotic Tatajuba wood).

A substructure made of aluminium profiles offers dimensional stability and resistance to weathering, UV exposure, insects, and mould, making it suitable for building any deck regardless of the wood species. The minimum centre-to-centre spacing of the substructure joists for each decking board thickness is specified in the table below:

DECKING BOARD	MAXIMUM JOIST SPACING (CENTER-TO-CENTER)
JATOBA 21 x 145 mm	440 mm

Surface Treatment:

To increase protection against both biotic and abiotic degradation, Jatoba decking should be surface-treated with one of the pigmented OSMO decking oils (a colourless coating is not recommended).

Application should be performed **no earlier than three months** after the boards have been exposed to weathering, allowing natural extractives to be washed out and enabling proper penetration of the coating into the wood pores. To maintain optimal hydrophobic properties, a **maintenance coat is recommended every six months**. To reduce the risk of end cracks, all cross-cuts should be sealed with **OSMO End-Grain Sealing Wax 5735**.

Note:

This technical sheet serves as a supplement to the “*Technical and Warranty Conditions of Real DECK.*”

Please note that our wood processing recommendations are **not binding installation instructions** but rather general guidelines. Each deck has unique parameters, and the installation company is always responsible for the correct method of installation and material usage.

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