



IPÉ

Botanical name:

Handroanthus spp. (formerly located in the genus Tabebuia)

Trade names:

Lapacho, Guayacan, Ebéne verte, Pao d'arco, Groenheart, Wehete, Wassiba, Ipê tabaco, Cogwood, Brazilian walnut, Paratodo, Puy, Lapacho negro, Ebano verde, Tahuari negro, Iron wood, Hakia, Tahuari, Tajibo, Polvillo, Araguaney Poi, Piúva, Ipê roxo, Ipê una, Ipê rojo, Red ipe (a mnoho dalších)

Location:

It is described as ecologically diverse due to its growth in very different conditions. From grasslands to rainforests, it develops well in tropical dry forests with sandy and moist soil. Occurrence in southern North America and northern South America (southern Mexico, Caribbean islands, Brazil, Guyana, Colombia, Venezuela, northern Argentina)

General description of wood:

The greyish to reddish whiteness transitions sharply into light olive green-brown heartwood darkening into green-brown to brown zones. In radial section intermittently streaked to mottled, wood matt glossy. Significant dulling effect in high cutting resistance processing.

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

Heartwood has a very high resistance to biological agents.

Wood properties:

Density (at W = 12 %)	1000-1200 kg/m ³
very heavy board	
Shrinkage in radial direction	5,9 %
Shrinkage in tangential direction	7,2 %
Total volume shrinkage	12,4 %
Medium shape changes	
JANKA hardness (at W = 12%, radial direction)	163,18 MPa
Group	MPa
Soft	<40

Medium hard	≥40
Hard	≥80
Flexural strength (<i>perpendicular to the fibres of the tang. and rad.</i>)	194,56 MPa
Compressive strength (<i>in fibre direction</i>)	91,49 MPa

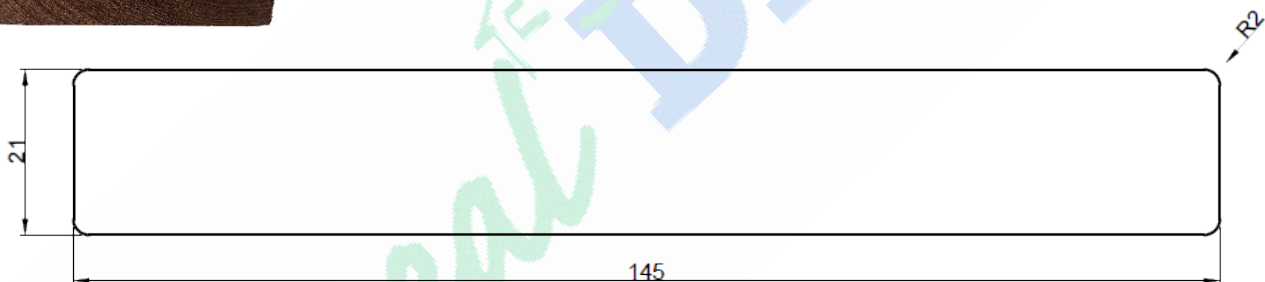
Terrace boards made of IPE wood

DIMENSIONS (mm)	LENGTHS (m)	GRADE	DRYING	VIEW SIDE
21 x 145	2,1 – 5,7 *	A/B	16–18 %	smooth

*stock lengths are multiples of 30 cm = 2.1 m, 2.4 m, 2.7 m, 3 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



IPÉ 21 x 145 mm – profile detail



GRADE

Terrace boards made of Ipé wood are supplied in A/B grading in a 60:40 ratio. In practice, this means that sixty percent of the material delivered has no defects on the face of the terrace boards at the time of delivery and, in general, the piece can be divided into a maximum of two usable parts during assembly. The remaining forty percent of the supply may show fine surface cracks and end cracks, but these must not run through the entire thickness of the board, but up to a maximum of 1/3 of the length of the board. An end crack is permitted for a maximum length of one terrace boardwidth. Healthy overgrown knots without restrictions, possibility of local insect holes (*only larval passages Ø 1-2 mm, insects did not survive artificial drying and insecticidal treatment before transport*). Permitted occurrence of pitcherworms.

TECHNICAL INFORMATION

DRYING

Wood is a hygroscopic material that changes its moisture content according to its surroundings through absorption, in an attempt to reach a state of moisture equilibrium. Terrace boards made of Ipé wood are kiln dried to a moisture content of 16-18%, which minimizes the risk of undesirable shape changes, significantly increases its mechanical properties with greatly improved resistance to bio attack. Shape changes caused by slumping and swelling can never be completely prevented. As a result of the anisotropic nature of slumping and swelling with simultaneous internal stresses in the wood, transverse and longitudinal buckling and the formation of drying cracks can occur.

VIEW SIDE

Each terrace board profile has a predefined face to which the grading applies. Quality claims using any other side as a view side will not be taken to consideration. The view side must be specified when ordering.

21 x 145 mm view side - smooth

Board contraction and expansion joints:

Due to the hygroscopicity and anisotropy of the wood, there can always be a slight deformation of the terrace boards in the longitudinal direction (curvature). These shape changes are not a defect in the material and do not prevent the installation of the terrace boards. To minimize the formation of shape changes, it is necessary to store the material tightly jointed until the time of installation. For easier assembly of curved boards, it is possible to use clamps designed for this purpose. Due to swelling and shrinking of wood due to weathering, it is necessary to leave a minimum of 8 mm of expansion between the individual terrace boards. The dimension of the expansion joint will change throughout the year as the dimensions of the terrace boards change due to weather changes. The main function of the expansion joint is the free movement of the terrace boards without the risk of damage.

Spectrum of colours:

Terrace boards made of Ipé wood are not subject to colour grading. The color spectrum ranges from grayish yellow to reddish sapwood to light olive green-brown heartwood darkening to zones of greenish brown to brown. Over time, the wood gradually darkens. In radial section intermittently streaked to mottled, wood matt glossy. In longitudinal directions fine grooves with light yellow filling (Lapachol).

Contains:

Exotic Ipé wood is very rich in tannins (*extractives*). These substances can be leached from the wood during exposure to the weather and cause colour stains on the surface of the wood and surrounding structures. During installation, care must be taken to ensure rainwater drainage and structural protection.

The greying of the wood:

As soon as the terrace boards are exposed to the weather, they are degraded by the action of so-called inanimate nature. Several interacting influences (water, radiation, flow, temperature changes, smog, emissions, etc.) cause the lignin to decompose by photochemical reactions in the first phase. This decomposition does not cause any observable darkening of the wood under outdoor conditions, because the disturbed lignin is subsequently washed away by rainwater, producing a lighter shade due to the light colour of the unremoved cellulose. In practice, however, the light shade is disturbed by the deposition of dust particles and impurities from the air into the porous structure of the wood surface, or by the co-growth of microscopic fungi, resulting in the well-known greying of the wood.

Choice of fasteners:

Ipé wood terrace boards are moderately stable, so they can be installed with both visible screw connections and invisible anchoring systems. Only material that does not cause a chemical reaction with the wood must always be used to prevent deterioration. This involves the use of a minimum A4 grade stainless steel for visible screw connection, or composite materials meeting the strength requirements for EURO Tec invisible anchoring

TECHNICAL INFORMATION

Recommended fasteners:

TERRACE BOARD	STEEL GRADE	DIMENSION OF THE ROLL	INVISIBLE ANCHORING
IPÉ 21 x 145 mm	A4	5 x 55 mm	YES

Substructure:

Installation of terrace boards can only be done on a solid wood substructure in one piece in available lengths of 2 - 5 m of the same or higher bio-resistance with a minimum profile of 45 x 70 mm (*exotic wood Jarana, Bangkirai*). Substructures made of laminated and glued together slats of the same or higher bio-resistance wood species can be used exclusively for the construction of covered terraces without permanent weathering. The aluminium profile substructure is shape stable, weatherproof, UV-resistant, insect and mould resistant and suitable for the construction of any terrace, regardless of the type of wood. The minimum axial spacing of the substructure for individual thicknesses of terrace boards is given in the following table:

TERRACE BOARD	MAXIMUM AXIAL SPACING OF THE UNDERLYING PRISMS
IPÉ 21 x 145 mm	420 mm

Surface treatment

To increase protection against biotic and abiotic degradation, a terrace made of Ipé wood should be coated with one of OSMO's pigmented terrace oils (*colourless coating is not recommended*). Application is carried out at the earliest six months after exposure to the weather to allow the leaching of the contained substances to allow the penetration of the coating into the pores of the wood (*due to the high density of Ipé wood and the extreme proportion of extractive substances contained, it is advisable to apply the surface treatment only after about one year after installation*). In order to maintain the best possible hydrophobic properties, it is advisable to carry out the renovation coating at an interval of about six months. To reduce the risk of end cracks, it is recommended that all transverse cuts are coated with OSMO 5735 cutting edge wax.

TECHNICAL INFORMATION

Remark:

The Technical Data Sheet serves as a supplement to the "Technical and Warranty Conditions of Real DECK"

Please note that our recommendations for the processing of boards for terraces are not binding installation guidelines, but recommendations. Each terrace is characterised by different parameters and the correct installation and use of materials is always the responsibility of the installation company..

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