Ipe

Common Name(s): Ipe, Brazilian Walnut, Lapacho

Scientific Name: Handroanthus spp. (formerly placed in the Tabebuia genus)

Distribution: Tropical Americas (Central and South America); also farmed commercially

Tree Size: 100-130 ft (30-40 m) tall, 2-4 ft (.6-1.2 m) trunk diameter

Average Dried Weight: 69 lbs/ft3 (1,100 kg/m3)

Specific Gravity (Basic, 12% MC): .91, 1.10

Janka Hardness: 3,510 lbf (15,620 N)

Modulus of Rupture: 25,660 lbf/in2 (177.0 MPa)

Elastic Modulus: 3,200,000 lbf/in2 (22.07 GPa)

Crushing Strength: 13,600 lbf/in2 (93.8 MPa)

Shrinkage: Radial**:** 5.9%, Tangential: 7.2%, Volumetric: 12.4%, T/R Ratio: 1.2

Color/Appearance: Heartwood can vary in color from reddish brown, to a more yellowish olive brown or darker blackish brown; sometimes with contrasting darker brown/black stripes. In certain species, there are powdery yellow deposits within the wood. Ipe can be difficult to distinguish visually from Cumaru, another dense South American timber, though Ipe tends to be darker, and lacks the subtle yet characteristic vanilla/cinnamon scent while being worked.

Grain/Texture: Has a fine to medium texture, with the grain varying from straight to irregular or interlocked. Moderate natural luster.

Endgrain: Diffuse-porous; solitary and radial multiples; medium to large pores in no specific arrangement, moderately numerous to numerous; tyloses and mineral/gum deposits occasionally present; parenchyma unilateral, winged, and marginal; narrow rays, spacing normal; ripple marks present.

Rot Resistance: Rated as very durable; excellent insect resistance, though some species are susceptible to marine borers. Superb weathering characteristics. (Ipe was used for the boardwalk along the beach of New York City's Coney Island, and was said to have lasted 25 years before it needed to be replaced: an amazing lifespan given the amount of traffic and environmental stresses put upon the wood.)

Ipe (continued)

Workability: Overall, Ipe is a difficult wood to work, being extremely hard and dense, with high cutting resistance during sawing. Ipe also has a pronounced blunting effect on cutting edges. The wood generally planes smoothly, but the grain can tearout on interlocked areas. Also, Ipe can be difficult to glue properly, and surface preparation prior to gluing is recommended. Straight-grained wood turns well, though the natural powdery yellow deposits can sometimes interfere with polishing or finishing the wood.

Odor: Ipe has a mild scent while being worked.

Allergies/Toxicity: Although severe reactions are quite uncommon, Ipe has been reported to cause skin, eye, and respiratory irritation, as well as other effects such as headaches, asthma-like symptoms, and/or disturbance of vision. See the articles Wood Allergies and Toxicity and Wood Dust Safety for more information.

Pricing/Availability: Primarily sold as decking or flooring, boards for furniture or general use are sometimes availabe as well. Prices are moderate for an imported tropical species.

Sustainability: This wood species is not listed in the CITES Appendices or on the IUCN Red List of Threatened Species. However, Ipe species grow in very low densities, with mature trees only occurring once per 300,000 to 1,000,000 square feet (3 to 10 hectares) of forest area. This necessitates the clearing of large sections of rainforest trees (most of which are of little commercial value). Though uncommon, certified sources of Ipe are available.

Common Uses: Flooring, decking, exterior lumber, veneer, tool handles, and other turned objects.

Comments: Ipe is a wood of extremes: extremely dense and durable, as well as extremely difficult to work. Its incredible hardness and strength make it well suited for flooring applications, though it is referred to as “Brazilian Walnut” among flooring dealers—though it is not related to true Walnut in the Juglans genus.

Formerly placed in the Tabebuia genus, species of Ipe (H. guayacan, H. impetiginosus, H. serratifolius) were moved to the Handroanthus genus in 2007 based on genetic studies.