



IPE

Source

FSC Ipe is available in the forests of Precious Woods, located in the Amazon region of Brazil. The large trees attain heights up to 40 m and diameters of about 100 cm. The sapwood is a few cm wide. Ipé contains Lapachol, which is used for medical applications.

Appearance

The heartwood has a greenish brown color and a very fine stripy pattern. A yellow/green content can be seen in the vessels (Lapachol), specially in the Surinam Ipe, which is also known as Surinam Greenheart. The sapwood is easy to distinguish. The grain is straight, sometimes irregular or interlocked. The texture is fine.

Processing properties

Machining goes well, despite the high density and hardness. A smooth result can be reached. The sawdust can cause an allergic reaction. When in contact with water, extractives in Ipe have a tendency to leech of the timber. Pre-drilling is recommended. Gluing is reported to be good, but difficult because of the high density. Drying goes slowly with few defects.

Application

Ipe is well-known for a wide spread of uses:

- Interior: e.g. flooring, parquet and stairs
- Exterior: e.g. cladding, decking and waterworks

Technical properties

Green density	1.200 – 1.300 kg/m ³
Density (at 12%)	1050 kg/m ³
Shrinkage green – oven dry	6,1% radial; 8,0% tangential
Shrinkage green – 65% RH (abt. 12% EMC)	2,4% radial; 3,2% tangential
Equilibrium Moisture Content (EMC)	12,5% (at 60% RH) 15% (at 90% RH)
Fibre Saturation Point (FSP)	20%
Durability according to EN 350:2016	Heartwood class 1
Bending strength, MOR (defect free samples)	166 N/mm ²
Modulus of elasticity, MOE (defect free samples)	22.760 N/mm ²
Shear strength (defect free samples)	17,5 N/mm ²
Janka hardness	14.400 N (transversal); 16.700 N (parallel)
Chemical composition	Cellulose: 46,4%; Hemicellulose: 17,5%; Lignine: 36,1%
<i>The figures in this table are mainly indicative, unless a specific standard is mentioned, which provides exact figures.</i>	

References

This information is based on research (mainly independent) and experience of Precious Woods, (semi-) scientific literature and the (Dutch) Houtvademecum (10th edition 2010).