PRECIOUS WOODS

PRODUCT INFORMATION

Angelim pedra (Sapupira)

Source

FSC Angelim pedra (Sapupira) is available in the forests of Precious Woods, located in the Amazon region of Brazil. The large trees attain heights up to 45 m and diameters up to 120 cm. The straight and cylindrical clear trunk has a length of 20 m. Research (2005) proves that the differences between Sapupira from different sources/regions are quite small.

Appearance

Freshly sawn, the color of the heartwood is orange yellow brown, darkening to (darker) brown. The wood has a remarkable stripy pattern. Irregular darker spots can be found (mineral spots). Green timber has a typical smell which disappears with time. The sapwood is easy to distinguish. The grain is straight to irregular and often interlocked. The texture is coarse. Sapupira achieved the Dutch KOMO approval for certified timber joinery, both for solid and transparent finish. Sapupira has a tendency to leech out water soluble extractives, but not as much as Merbau. Sometimes the timber is confused with Angelim vermelho.

Processing properties

Machining can be done well, specially with hard metal tools, resulting in a rather smooth surface. Pre-drilling is recommended. The gluing and finishing can be done according to the rules of the Dutch KOMO certification for window and door frames. The GluGreen® Technology could succesfully be applied to green sawn timber. Take care for correct filling of the pores in the wood surface during coating. Drying is difficult, with a risk of distortion and checking.

Application

Angelim pedra is widely used for various applications, like interior carpentry, window frames, doors and stairs. Exterior uses are window frames, doors, cladding, park benches, decking and structural beams.

Technical properties

Green density	1.100 kg/m^3
Density (at 12%)	650-750 kg/m^3
Shrinkage green – oven dry	4,4% radial; 6,0% tangential
Shrinkage green – 65% RH (abt. 12% EMC)	1,4% radial; 2,5% tangential
Swelling between 50-90% RH	1,3% radial; 2,3% tangential
Equilibrium Moisture Content (EMC)	8,5% (at 65% RH water adsorption) 11,2% (at 65% RH water desorption) 16,5% (at 95% RH water adsorption)
Fibre Saturation Point (FSP)	25%
Durability according to EN 113 (without soil contact)	Heartwood class 1
Durability according to ENV 807 (with soil contact)	Heartwood class 2
Durability according to literature	Heartwood class 1
Bending strength, MOR (defect free samples)	119 N/mm^2
Modulus of elasticity, MOE (defect free samples)	20.870 N/mm^2
Shear strength (defect free samples)	13,8 N/mm^2
Janka hardness	9.030 N (transversal); 7.660 N (parallel)
Strength class (EN 338)	D30 *)
Chemical composition	Cellulose: 49,1%; Hemicellulose: 19,3%; Lignine: 31,6%

The figures in this table are mainly indicative, unless a specific standard is mentioned, which provides exact figures.
*) This value is determined by testing of a limited number of full scale samples. A higher value is expected by testing more samples.

References

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

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