

Data Table for: Wood: Wood Class II (15-25 years): Azobe (Lophira alata)

Mechanical Properties

Quantity	Value	Unit
Young's modulus	22000 - 28500	MPa
Tensile strength	120 - 217	MPa
Compressive strength	88 - 130	MPa
Bending strength	180 - 316	MPa

Physical Properties

Quantity	Value	Unit
Thermal conductivity	0.17 - 0.17	W/m.K
Density	0 - 1040	kg/m ³
Shrinkage	1.7 - 2.2	%

Environmental Data

Quantity	Value	Unit
Eco indicator 95	1.65	mPt
EPS	146	mELU
Ex (in) / Ex (out)	2.54807692307692	MJ/MJ
GER	39.1	MJ
Raw materials input	2.1378865744058	kg
Solid	0.101330999452	kg
Eco indicator 99	2.79	Pt

Environmental remarks: Azobe is dominantly imported from tropical Africa. The wood is not cultured. The deforestation of tropical wood causes serious local environmental problems and is related to the climate change in the world. The transport to the Netherlands requires 2 * 250km by trailers (from factory to forest and back) and 5748km by ship.

Author: Idemat 2003, Design for Sustainability, Delft University of Technology, Idemat 1998

General

Synony ms Azobé
Bongossi
Lophira alata
Ekki

Red Ironwood

Origin: Tropical West Africa (Gabon, Cameroon, Nigeria). Colour and texture: Dark redbrown, light violet hue; smooth surface; irregularly and not always strikingly striped. Workability: not easy to machine and only with carbon-steel tools or harder; good but hard to glue, especially with great lengths; good surface treatment possible; not easy to preserve/impregnate. Weather- and wear-resistant. Lower Heating Value 18.35 MJ

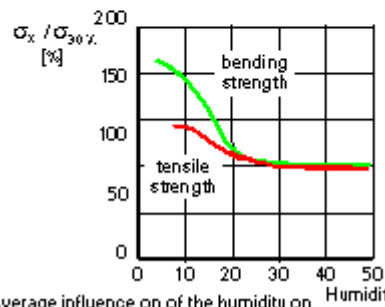
Sample



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Classes of sustainability according to NEN-EN 350-2	Wood in constant contact with humid soil without this soil being under water while the wood is not sustained or otherwise protected	Wood exposed to outdoor conditions while the wood is not sustained or otherwise protected
I very sustainable	more than 25 years	50 years
II sustainable	15-25 years	40-50 years
III moderate sustainable	10-15 years	25-40 years
IV poor sustainable	5 to 10 years	12-25 years
V not sustainable	less than 5 years	6-12 years

Classes apply for climate circumstances occurring in Central Europe and the UK



Average influence on of the humidity on strength properties of soft wood