

Myanmar Hardwoods

Teakwood (*Tectona grandis*)

Moisture Content	Bending Strength	Mod. of Elasticity	Compression parallel to grains	Hardness (Radial)	Impact Max. Drop
%	N/mm ²	N/mm ²	N/mm ²	Kg	mm
14.1	100	12627	57.6	436	787

Strength: Teakwood is strong, moderately elastic and hard.

Movement: Small and exceptionally steady. Shrinkage from green to oven-dry is approximately 1.5% radially and 2.5% tangentially.

Durability and Preservation: One of the most naturally durable timbers of the world. Practically impervious to insects and white ants but not immune to marine borers. High in resistance to acid and fire. Lasts well in contact with or under water, and lasts indefinitely under water. Extremely resistant to preservative treatments.

Pyinkado (*Xylia dolabriformis*)

Moisture Content	Bending Strength	Mod. of Elasticity	Compression parallel to grains	Hardness (Radial)	Impact Max. Drop
%	N/mm ²	N/mm ²	N/mm ²	Kg	mm
10.3	142	17457	79.6	983	1270

Strength: Pyinkado is a hard and extremely strong timber possessing high strength properties.

Movement: Medium. Shrinkage from green to oven-dry is approximately 3.3% radially and 6.7% tangentially.

Durability and Preservation: Very durable and resistant to termite attack, but not entirely immune from it. It is also resistant to marion borers. The heartwood is extremely resistant to preservative treatment and sapwood is moderately resistant.

Padauk (*Pterocarpus macrocarpus*)

Moisture Content	Bending Strength	Mod. of Elasticity	Compression parallel to grains	Hardness (Radial)	Impact Max. Drop
%	N/mm ²	N/mm ²	N/mm ²	Kg	mm
12.5	142	14330	75.5	983	1041

Strength: Padauk is one of the heaviest, hardest and strongest timber in South-East Asia.

Movement: Small and definitely steady. Shrinkage from green to oven-dry is approximately 2.8% radially and 3.9% tangentially.

Durability and Preservation: Extremely durable and resistant to termites. Extremely resistant to preservative treatment, but does not require it generally. Untreated timber under most severe conditions lasts more than 12 years.

Thitya (*Shorea oblongifolia*)

Moisture Content	Bending Strength	Mod. of Elasticity	Compression parallel to grains	Hardness (Radial)	Impact Max. Drop
%	N/mm ²	N/mm ²	N/mm ²	Kg	mm
10.6	158	19430	76.0	942	1117

Strength:Thitya is hard and strong.

Movement: Approximate shrinkage from green to oven-dry is 5.4% radially and 9.7% tangentially.

Durability and Preservation: Extremely durable and hard. Untreated sleepers last for 15 years. Durable in contact with the ground or water. White ant proof and no fungus attack. Extremely resistant to preservative treatment.

Ingyin (*Pentacme siamensis*)

Moisture Content	Bending Strength	Mod. of Elasticity	Compression parallel to grains	Hardness (Radial)	Impact Max. Drop
%	N/mm ²	N/mm ²	N/mm ²	Kg	mm
13.4	111	15718	54.3	745	838

Strength: Ingyin is very hard and strong.

Movement: Considerable movement. Shrinkage from green to oven-dry is about 4.8% radially and 8.9% tangentially.

Durability and Preservation: A very durable timber and proof against white ant. Treatment is very difficult as the timber is hard and heavy. Treatment is normally not required as it is naturally durable.

Thinwin (*Millettia pendula*)

Moisture Content	Bending Strength	Mod. of Elasticity	Compression parallel to grains	Hardness (Radial)	Impact Max. Drop
%	N/mm ²	N/mm ²	N/mm ²	Kg	mm
43	97	1249	46.2	1030	1370

Strength: Thinwin is strong and very hard.

Movement: Shrinkage from green to oven-dry is about 5.1% radially and 7.9% tangentially.

Durability and Preservation: Extremely durable and rarely attacked by insects. Very resistant to preservative treatment.

Taukkyan (*Terminalia tomentosa*)

Moisture Content	Bending Strength	Mod. of Elasticity	Compression parallel to grains	Hardness (Radial)	Impact Max. Drop
%	N/mm ²	N/mm ²	N/mm ²	Kg	mm
13.2	106	13150	57.1	930	1219

Strength: Taukkyan is hard and strong timber.

Movement: Shrinkage values from green to oven-dry is approximately 4.7% radially and 7.1% tangentially.

Durability and Preservation: Durable under cover, and moderately durable in exposed conditions. It is resistant to dry rot and white ants, but not entirely immune to it. It can be treated readily with preservatives.

In (*Dipterocarpus tuberculatus*)

Moisture Content	Bending Strength	Mod. of Elasticity	Compression parallel to grains	Hardness (Radial)	Impact Max. Drop
%	N/mm ²	N/mm ²	N/mm ²	Kg	mm
19.4	96	13550	46.8	733	1118

Strength: In is hard and strong.

Movement: Shrinkage from green to oven-dry is 4.4% radially and 9.1% tangentially.

Durability and Preservation: Classed as moderately resistant to decay, but not resistant to termites. It is durable under cover, but not so in exposed condition. When treated with oil and creosote, it lasts for 8 years under tropical conditions. The timber lends itself to preservative treatment, but complete penetration is not always obtained.

Kanyin (*Dipterocarpus spp*)

Species	Moisture Content	Bending Strength	Mod. of Elasticity	Compression parallel to grains	Hardness (Radial)	Impact Max. Drop
	%	N/mm ²	N/mm ²	N/mm ²	Kg	mm
D.alatus	17.2	86	13082	44.8	447	762
D.turbinatus	14.3	108	15456	53.4	633	1041

Strength: The Kayins are strong woods, but the properties vary according to the species.

Movement: Shrinkage from green to oven-dry is in the range of 7.5-11.5% tangentially and 2.5-5.5% radially.

Durability and Preservation: Moderately durable. Not resistant to termite attack. Durable under cover, but not when exposed or when in contact with the ground. Resistance to preservative treatment varies from moderately resistant to resistant. Sapwood is moderately resistant.