Mengkulang/red palapi

Atibt
Mengkulang; NEN-EN 13556: mengku-lang (GB), mengkulang (F), Mengkulang (D), Code HEXM.

Other names
Lumbayao (Filipijnen), kembang (Sabah), teraling, mengkulang, palapi (Indonesië, Maleisië, Sarawak), chumprak (Thailand), kanze, kanazo (Myanmar/Birma), huynh (Cambodja), hao (Laos).
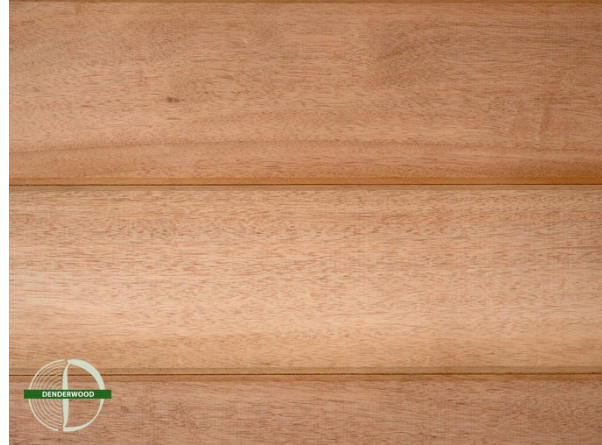
Botanic name
Heritiera simplicifolia (Mast.) Kosterm. (= Tarrietia simplicifolia), Heritiera javanica (Blume) Kosterm., Heritiera sumatrana (Miq.) Kosterm., Heritiera spp..

Family
Malvaceae (= Sterculiaceae)

Growth area
Southeast Asia, mainly Malaysia, Indonesia and Philippines.

Tree Description	Height 30-45(-50) m. The 18-24 m long branchless trunk is usually quite straight and cylindrical with a diameter of 0.6-1.2(-1.35) m. The trunks can have up to 3 m high root attachments depending on the species.
Supply	Sawn (edged) lumber.
Wood Description	The heartwood is pinkish brown to reddish brown. The 50-125 mm thick sapwood is light reddish brown to yellowish red and hardly contrasts with the heartwood. The soft silky sheen of the planed wood is striking. On the quarter face, the cross grain gives a broad stripe pattern. Brittle heart (a brittle woolly core) up to 150 mm in diameter may occur. This section is unusable for structural purposes. Mengkulang is somewhat (unpleasant or aromatic) smelling freshly sawn.
Wood Recognition	Red-brown in color and a coarse texture, on copse plane few large vessels, parenchyma not visible, rays clearly visible, on the quarter plane rays visible as small dark mirrors, on the dosse plane etage building. The similar niangon is only anatomically distinguishable from mengkulang outside of its high resin content.
Grain	Straight to cross-threaded, sometimes irregular thread.
Texture	Moderately coarse to coarse.
Voluminous mass	(520-)700(-950) kg/m³ at 12% moisture content.
Shrinkage	Radial 3.0% and tangential 7.0%.

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Drying	Moderately fast. Both air and accelerated, mengkulang dries fairly quickly. There is some tendency for surface cracks to form and deform so drying should be done carefully. A calibration line is available for making electrical wood moisture measurements.
Hardness	Longitudinal plane 5050 N.
Machinability	When machined, tools dull quickly due to the presence of gravel (<0.5%). When planning quarter-sawn wood with cross grain, a good smooth surface can be obtained by keeping the cutting angle at 20°.
Nailing & Screwing	Moderate. Pre-drilling is recommended.
Adhesives	Good .
Bend	Would be good to bend.
Surface finish	Good. For nice smooth paintwork, use of a pore filler is recommended.
Impregnability	Heartwood 3, sapwood 2 (according to NEN-EN 350).
Details	Mengkulang is the preferred name of Heritiera species found in Malaysia, Kalimantan and Sarawak. Similar wood is known as chumprak in Thailand and lumbayao in the Philippines. In the literature, this type of wood is often still referred to by the old botanical name Tarrietia, which, however, has changed since 1962. When seeing mengkulang, one immediately notices its similarity to the African wood species niangon. The Indonesian wood (palapi) is said to have somewhat better properties than mengkulang.
Applications	Mengkulang is used to manufacture plywood and particleboard. Nicely drawn blocks also qualify for cut veneer. Locally, mengkulang is used for construction lumber and for stairs, flooring and furniture. In Britain, it is also used for flooring. Further, for interior joinery such as frames, windows and doors, where turning parts should be quartered wood and mengkulang is considered a good substitute for red meranti, niangon and African mahogany.
Strength class	Classified as D30 depending on origin and quality (see Table D).

Sustainability

Relative resistance to mold
The durability of mengkulang is somewhat lower than that of the similar niangon. This is because niangon is resinous and more difficult to impregnate. Heartwood class 4 (NEN-EN 350: practical experience and field research).

Relative resistance to animal organisms
Heartwood: drywood borers D, termites S and marine borers S (NEN-EN 350).

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