

MENKULANG

Botanical name:	<i>Heritiera</i> spp., family STERCULIACEAE
Other important species:	<i>Heritiera borneensis</i> , <i>H. javanica</i> , <i>H. sumatrana</i>
Distribution:	Burma to Pacific Islands
Other important trade names:	Palapi, teraling (ID); kembang (MY)
Abbreviation as per DIN EN 13556:	HEXM

Colour and structure of the wood:

Heartwood brown or red, occasionally with colour stripes. Sapwood pale yellowish brown or pink-brown, not always clearly contrasting from the mostly reddish-brown heartwood, narrow to medium width. Woods of medium to coarse texture; slight glossy, irregular grain (transom bar) as well as fine reflection appear more frequently. Cross grain present.

Properties:

Weight fresh [kg/m ³]	900 – 950	
Bulk density air-dry (12-15 % u) [g/cm ³]	0.55 – 0.72	
Compression strength u ₁₂₋₁₅ [N/mm ²]	(30–) 34 – 45 (–52)	
Bending strength u ₁₂₋₁₅ [N/mm ²]	(68–) 75 – 85 (–101)	
Modulus of elasticity (bending) u ₁₂₋₁₅ [N/mm ²]	9500 – 14500 – 16600	
Toughness [kJ/m ²]	-	
Hardness (BRINELL) ⊥ to the grain u ₁₂₋₁₅ [N/mm ²]	14 – 22 – 28	
Drying shrinkage (fresh up to u ₁₂₋₁₅)	radial [%]	2.5 – 3.0
	tangential [%]	4.5 – 7.0
Differential shrinkage [%/%]	radial	
	tangential	
pH value (suspension)	4.9	
pH value (surface)	3.7	
Natural durability (DIN-EN 350-2)	category 4	

Workability:

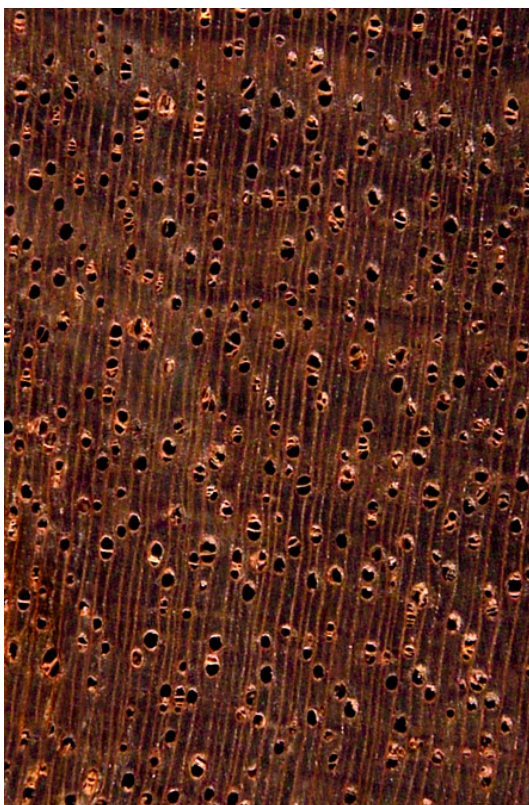
Mengkulang is sometimes difficult to work due to the occurrence of silica in the wood texture (xylem). The tool cutting edges blunt more easily especially in dry processing (sawing, planing, milling, etc.). Planing of radial surfaces can lead to tearing of fibres due to pronounced cross grain. Nails and screws generally hold well, pre-drilling is however recommended. Bonding good to medium. "Greasy" surfaces should be degreased prior to bonding, otherwise problems may occur in bonding. Watery dispersion adhesive is less suitable.

Drying:

Mengkulang generally dries fairly quickly, however with a slight to medium tendency to warping as well as surface and end cracks (weighting down or clamping is recommended to reduce deformation). Technical drying must be carried out carefully.

Use:

Outdoor or indoor use. Especially suitable for: Outdoor construction with no ground contact, exterior cladding (facades), rotary cut veneer (for plywood), frame structure (windows, house doors, conservatories), wall and ceiling coverings (internal), furniture.



Macroscopic cross-section of Mengkulang
(10 times magnification lens)



Wood surface of Mengkulang (radial section)

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Surface treatment:

Problems occur with woods having high concentrations of "greasy" content. Treatability very poor. Weak discolouring possible in contact with iron ions (iron/tannin reaction).

Coating systems:

The coating systems selected here are variants which ensure utmost durability and lasting quality.

Other coating systems are basically possible; however, they must be coordinated with Teknos.

Details on processing can be found in the technical data sheets for each product.

Windows, doors, conservatories and folding shutters:

System coating	Translucent
Wood preservative	GORI 356 / TEKNOL AQUA 1410-01
Primer	AQUAPRIMER 2900-42
Intermediate	ANTISTAIN AQUA 2901-62
Topcoat	AQUATOP 2600-9X

System coating	Opaque
Wood preservative	GORI 356 / TEKNOL AQUA 1410-01
Primer	ANTISTAIN AQUA 2901-52
Intermediate	ANTISTAIN AQUA 2901-52
Topcoat	AQUATOP 2600-2X

System coating	Colourless
Wood preservative	GORI 356 / TEKNOL AQUA 1410-01
Intermediate	ANTISTAIN AQUA 2901-62
Topcoat	AQUATOP 2600-6X

Further information: Teknos A/S
 Industrivej 19
 DK-6580 Vamdrup
 Tel: +45 76 93 94 00
www.teknos.com

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Wood is a unique, beautiful and very versatile material

The features and properties of wood vary greatly and therefore individual attention is required in processing and surface finishing.

With this Teknos wood data sheet we would like to go into detail on the features and range of applications in the coating of important wood species.

The data sheet originated from a collaboration with the Johann Heinrich von Thünen-Institute in Hamburg.

The pH values of wood have been determined as important chemical variables for the first time.

The concentration dependence of extracts such as tannic acids or tannins to the pH value is important.

A good surface coating and targeted selection of system structures shall be safer based on these variables determined by Thünen-Institute and demonstrate wood-related problem solving.

All system structures named in the data sheet are selected according to utmost durability and quality and are considered to be relevant systems. However, a practical test is always necessary.

Due to different application possibilities and stresses of parts to be coated, variations are required.

To select individual systems easily, the Teknos technical department will be happy to assist you.

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