

BINTANGOR

Botanical name:	<i>Calophyllum</i> spp. (Asia), family CLUSIACEAE (GUTTIFERAE)
Distribution:	Southeast Asia to Australia
Other important trade names:	Bintangur (ID); Penaga, bakakol, entangor (MY); calophyllum (PG)
Abbreviation as per DIN EN 13556:	CLXX

Colour and structure of the wood:

Heartwood brown or red, no colour stripes. Clear colour contrast between sapwood and heartwood (sap yellowish brown with pink element). Irregular grain (diagonal, warped, twisted) occurs frequently with Bintangor. Cross grain.

Variations:

Calophyllum is a very large genus with around 190 species, which means that variations in wood colour, texture and properties are possible.

Properties:

Weight fresh [kg/m ³]		930 – 930
Bulk density air-dry (12-15 % u) [g/cm ³]		(0.45 -) 0.64 – 0.74 (- 0.85)
Compression strength u ₁₂₋₁₅ [N/mm ²]		(42 -) 55 – 66
Bending strength u ₁₂₋₁₅ [N/mm ²]		(74 -) 94 – 106
Modulus of elasticity (bending) u ₁₂₋₁₅ [N/mm ²]		(8000 -) 13700 – 15300
Toughness [kJ/m ²]		n/a
Hardness (BRINELL) ⊥ to the grain u ₁₂₋₁₅ [N/mm ²]		14 – 31
Drying shrinkage (fresh up to u ₁₂₋₁₅)	radial [%]	1.4 – 3.1
	tangential [%]	2.0 – 3.7
Differential shrinkage [%/%]	radial	n/a
	tangential	n/a
pH value (suspension)		4.7
pH value (surface)		5.2
Natural durability (DIN-EN 350-2)		category 3

Workability:

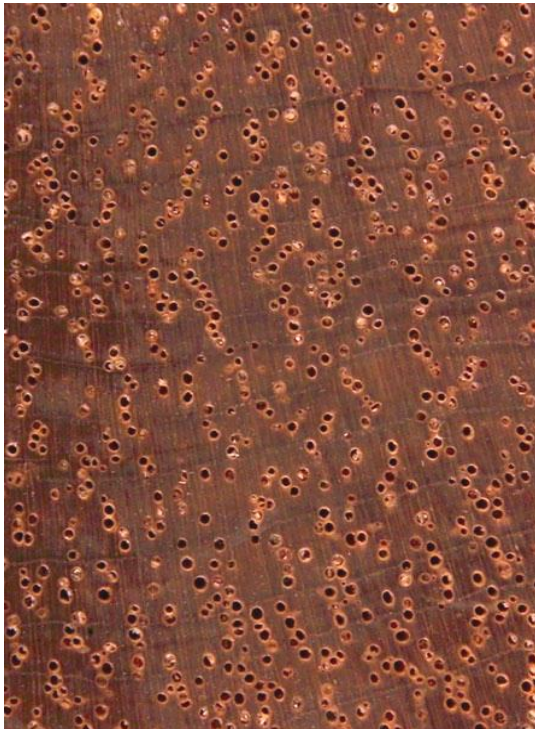
Bintangor is good for sawing; however, planing and milling require great caution because the surfaces are prone to tearing due to the irregular grain. Pre-drilling essential for nailing and screwing. Bonding good to medium.

Drying:

Bintangor dries at normal to low speed. It is largely prone to deforming (dishing, twisting), less prone to forming cracks and collapse. Internal tensions often exist.

Use:

Outdoor use (not in ground contact), or indoor use; non-supporting. Especially suitable for: outdoor construction with no ground contact, rotary cut veneer (for plywood), frame construction (window, house doors, conservatories), floors (parquet, boards, etc.), stairs, wall and ceiling coverings (internal), furniture.



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



Wood surface of Bintangor (radial section)

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Surface treatment:

After thorough priming, surface treatment achieves good results. Fluctuations in properties regarding density and colour can be a problem in translucent systems. Treatability moderate to poor.

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 2900-22
Intermediate	AQUAFILLER 6500-01
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	AQUAFILLER 6500-01
Topcoat	AQUATOP 2600-6X

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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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