IROKO, KAMBALA

Botanical name: *Milicia excelsa,* Synonym: *Chlorophora excelsa,* family MORACEAE

Distribution: Tropical Africa

Other important trade names: Iroko (D, F, GB, NL, WAN), kambala (G, RPC, ZRE), odum (GH, CI)

Abbreviation as per DIN EN 13556: MIXX

Colour and structure of the wood:

Heartwood brown, no colour stripes. Clear colour contrast between sapwood and heartwood, medium width. The sap is yellowish grey, the fresh heartwood also of the same origin, often varying, grey to greenish yellow, sometimes also brown, when exposed to sunlight, with mat gloss golden brown darkening to dark olive brown and adapting in colour. The growth zone boundaries are marked with fine marginal parenchyma bands in isolated cases. The pores are visible to the naked eye on all cut surfaces and variegate the surface. Cross grain present (to varying degrees).

Properties:

Weight fresh [kg/m³]		950 – 1000 – 1150
Bulk density air-dry (12-15 % u) [g/cm³]		0.63 – 0.77
Compression strength u_{12-15} [N/mm²]		50 – 70
Bending strength u_{12-15} [N/mm²]		90 – 120
Modulus of elasticity (bending) u_{12-15} [N/mm²]		9500 –13000
Toughness [kJ/m²]		26 – 50
Hardness (BRINELL) ⊥ to the grain u_{12-15} [N/mm²]		21 – 33 – 45
Drying shrinkage (fresh up to u_{12-15})	radial [%]	1.5
	tangential [%]	2.0
Differential shrinkage [%/%]	radial	0.13 – 0.19
	tangential	0.25 – 0.28
pH value (suspension)		5,5
pH value (surface)		6,1
Durability class (EN 350:2016)		DC 1 – 2

Additional information

Very occasionally allergic reactions may occur when the work is being machined. The sawdust can cause allergic bronchial asthma in sensitive people.

Workability:

The partial distinctive cross grain affects the surface quality. In individual cases, mineral inclusions (calcium carbonate) can reduce the tool endurance. Nailed and screw joints show good durability, however pre-drilling is recommended. Due to possible irritation from sawdust, good extraction is required. Bonding good.

Drying:

Open air as well as kiln drying are possible without any difficulties. Only a low tendency to crack and warp. Imprints of stacking pallets because of the high reactivity of substances are a frequent problem.

Use:

Outdoor or indoor use. Especially suitable for: Outdoor use with no ground contact, horticulture and landscaping, children's play area and equipment (durable garden furniture), frame structure (windows, house doors, conservatories), floors (parquet, boards, etc.), stairs, furniture, liquid containers in the chemical industry, other uses (boat and vehicle building).

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

Wood surface of Iroko (radial section)

Surface treatment:

The pH value is in the slightly acidic range. Defective film formation or delayed film drying may occur during paint application. Outdraws of naturally existing resins are possible. Corrosion of iron in contact with wood: weak (with very differing intensity).

Coating systems:

The coating systems illustrated here are examples developed to ensure utmost durability and lasting quality.

Alternative systems are also available; however, these must be confirmed by Teknos. Please contact your local Teknos representative for further details.

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

Windows, doors, conservatories, and folding shutters:

System coating	Translucent
Primer	AQUAPRIMER 2900-43
Intermediate	ANTISTAIN AQUA 2901-63
Intermediate	ANTISTAIN AQUA 2901-63
Topcoat	AQUATOP 2600 translucent topcoat

System coating	Opaque
Primer	ANTISTAIN AQUA 2901-52
Intermediate	ANTISTAIN AQUA 2901-52
Topcoat	AQUATOP 2600-2X

System coating	Colourless
Primer	ANTISTAIN AQUA 2901-63
Intermediate	ANTISTAIN AQUA 2901-63
Topcoat	AQUATOP 2600-6X
Topcoat	AQUATOP 2600-6X

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.