

DARK RED MERANTI

Botanical name:	<i>Shorea</i> spp., section <i>Rubroshorea</i> , family DIPTEROCARPACEAE
Other important species:	<i>Shorea curtisii</i> , <i>S. hemsleyana</i> , <i>S. macrantha</i> , <i>S. zpauciflora</i>
Distribution:	Thailand, Laos, Vietnam, Cambodia, Indo-Malaysia
Other important trade names:	Dark red meranti, seraya, lauan (D); kawang, seraya bunga, red seraya, obar suluk (MAL.Sab.)

Abbreviation as per DIN EN 13556: SHDR

Colour and structure of the wood:

Heartwood brown or red. Clear colour contrast between sapwood and heartwood, narrow. The sapwood is usually light grey to pale pink. The heartwood is pale pink to dark reddish brown, with very heavy woods, e.g. Nemesu, partly with violet tinge. The resin ducts on the cross-section in long tangential bands create fine white stripes on longitudinal surfaces (in radial section) or a fine white raised "cathedral effect" formed by innermost growth rings (in tangential section). Cross grain (often very pronounced in dark and heavy wood, clear as glossy stripes on radial surfaces).

Properties:

Weight fresh [kg/m ³]		800 – 1000
Bulk density air-dry (12-15 % u) [g/cm ³]		0.54 – 0.76 (-0,87)
Compression strength u_{12-15} [N/mm ²]		51 – 65
Bending strength u_{12-15} [N/mm ²]		90 – 126
Modulus of elasticity (bending) u_{12-15} [N/mm ²]		11400 – 15700
Toughness [kJ/m ²]		49 – 69
Hardness (BRINELL) \perp to the grain u_{12-15} [N/mm ²]		21 – 26
Drying shrinkage (fresh up to u_{12-15})	radial [%]	3.0
	tangential [%]	5.5
Differential shrinkage [%/%]	radial	0.14 – 0.18
	tangential	0.29 – 0.34
pH value (suspension)		3.3 – 4.7
pH value (surface)		5.1
Durability class (EN 350:2016)		DC 2 – 4

Additional information:

Can cause skin irritations due to the resin (terpenoids) contained in wood. In contrast to most wood species, with Dark Red Meranti there is a positive relationship between natural durability and mass density; to obtain wood in durability classifications 2 and 3, the mass density should be over 0.55 g/cm³ (with wood moisture between 12 % and 15 %).

Workability:

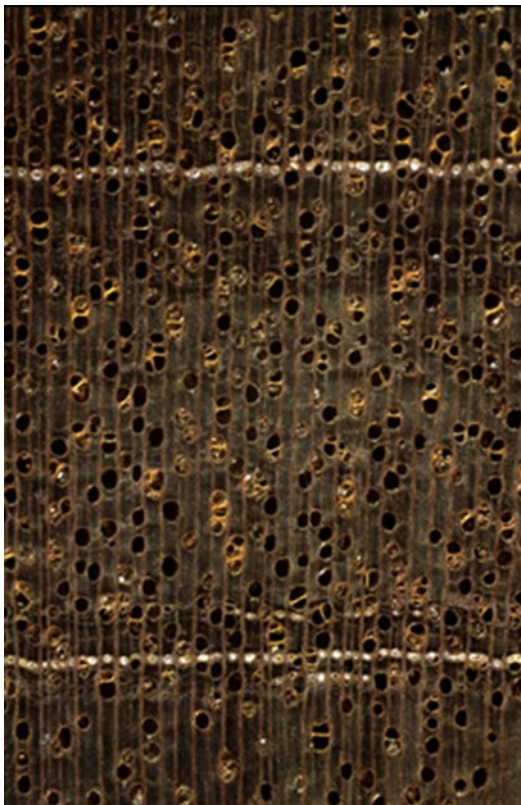
The woods in this group are usually easy to work, good for slicing and cutting. Nails and screws hold well, pre-drilling is necessary for heavy woods. Bonding good to medium (problems can arise when traumatic resin ducts exist whose resins do not crystallise out during the drying process and often are still sticky).

Drying:

The medium weight woods in this group dry easily in general, heavy, and dark woods, e.g. Nemesu, on the other hand, require more time and careful drying guidance. Some types have a particular tendency to warp and form cracks.

Use:

Outdoor or indoor use; supporting or non-supporting. Especially suitable for: Outdoor construction with no ground contact (good qualities (Dark Red Meranti) for balconies, terraces etc.), frame construction (windows, house doors, conservatories) (laminated profiles, finger-joined pole products etc.).



Macroscopic cross-section of Dark Red Meranti
(10 times magnification lens)



Wood surface of Dark Red Meranti
(radial section)

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Surface treatment:

The surface treatment can be affected in woods with an increased occurrence and appearance of water-soluble, washable content. For closed surfaces pore filler should be used because of the rough porosity.

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
Wood preservative*	TEKNOL AQUA 1412-01 / TEKNOL AQUA 1410-01 / TEKNOL AQUA 1415-01
Primer	AQUAPRIMER 2900-X2
Intermediate	AQUAFILLER 6500-01
Topcoat	AQUATOP 2600 translucent topcoat

System coating	Opaque
Wood preservative*	TEKNOL AQUA 1412-01 / TEKNOL AQUA 1410-01 / TEKNOL AQUA 1415-01
Primer	ANTISTAIN AQUA 2901-52
Intermediate	ANTISTAIN AQUA 2901-52
Topcoat	AQUATOP 2600-2X

System coating	Colourless
Wood preservative*	TEKNOL AQUA 1412-01 / TEKNOL AQUA 1410-01 / TEKNOL AQUA 1415-01
Intermediate	AQUAFILLER 6500-01
Topcoat	AQUATOP 2600-6X
Topcoat	AQUATOP 2600-6X

*The use of biocidal products within EU is only allowed if the product has been authorized according to BPR for the country in question. Use biocides safely. Always read the label and product information before use.

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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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