



Kwila – *Intsia bijuga, palembanica*

OTHER NAMES: Merbau, Vesi, Ipil

REGION OF ORIGIN: Indonesia, Papua New Guinea

GENERAL DESCRIPTION

Kwila heartwood is yellow-brown to dark red-brown in colour. The grain is slightly interlocked and the texture is moderately coarse. Yellow deposits in the vessels are a common feature of the wood. It is non-siliceous, sometimes lustrous. Timber 'bleeds' when wet producing dark red-brown stain.

MAIN USES

A premium heavy construction timber due to its low shrinkage and durability. Also used for decking, flooring, interior and exterior joinery and outdoor furniture.

WORKING PROPERTIES

The wood can be worked well but has severe blunting effect. It tends to split when nailed, but holds fastenings well. May need treating before gluing. It takes stain, polish and paint well but oily patches may adversely affect the finish.

MECHANICAL PROPERTIES

Kwila has high bending strength, crushing strength and stiffness, with medium resistance to shock loads. It has a poor steam bending classification due to exudation of oil.

AVAILABILITY

Specifications stocked at Rosenfeld Kidson are:
Sawn 25mm, 40mm, 50mm, 75mm, 100mm and 150mm thicknesses in varying fixed widths. T&G strip and overlay flooring and machined decking profil

GRADING

Select & Better.

DENSITY (kg/m3)*:	870
DURABILITY:	Durable

STRENGTH GROUP:	SD3
MOR (MPa):	115.8
MOE(GPa):	15.4
JANKA(kN):	6.7

SHRINKAGE GREEN TO 12% M.C.	Tangential	Radial
	4.6	2.7

*Air Dry Density (kg/m3) is average indication only and actual value may vary. Refer to timber properties tables over page for strength, shrinkage and durability classifications.

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TIMBER PROPERTIES

STRENGTH GROUPINGS

Minimum values for strength groups (unseasoned timber)			
(units are Mpa = 145 lb/sq.inch)			
Strength group	Modulus of rupture	Modulus of elasticity	Maximum crushing strength
S1	103	16300	52
S2	76	14200	43
S3	73	12400	36
S4	62	10700	31
S5	52	9100	26
S6	43	7900	22
S7	36	6900	18

Minimum values for strength groups (seasoned timber)			
(units are Mpa = 145 lb/sq.inch)			
Strength group	Modulus of rupture	Modulus of elasticity	Maximum crushing strength
SD1	150	21500	80
SD2	130	18500	70
SD3	110	16000	61
SD4	94	14000	54
SD5	78	12500	47
SD6	65	10500	41
SD7	55	9100	36
SD8	45	7900	30

SHRINKAGE CLASSIFICATIONS

Description of shrinkage	Shrinkage from Green to Oven-dry (12% MC)	
	(%) before reconditioning	
	Tangential	Radial
Very Low	0 - 3.5	0 - 2
Low	3.5 - 5.0	2 - 3
Medium	5.0 - 6.5	3 - 4
High	6.5 - 8.0	4 - 5
Very High	> 8.0	> 5

DURABILITY CLASSIFICATIONS

Grade of durability	Approximate service life (years)		
	Fully Protected	Above ground, exposed	In-ground, exposed
Very Durable	> 50	> 40	> 25
Durable	> 50	15 - 40	15 - 25
Moderately Durable	> 50	7 - 15	5 - 15
Non-Durable	> 50	0 - 7	0 - 5

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