



Massa – *Manilkara bidentata*

Other Names: Massaranduba, Bulletwood, Pacific Jarrah

Region of Origin: South America

SPECIES OVERVIEW:

The heartwood of Massa is light red when freshly cut, turning to dark reddish-brown when dry. Lustre is medium and texture fine and uniform. Grain is usually straight, occasionally interlocked. The timber is hard, heavy, strong and very durable. Massa carries independent FSC100% certification that it is sourced from legal and well managed forests.

MAIN USES:

Heavy construction, flooring, decking, interior and exterior joinery.

WORKING PROPERTIES:

Moderately hard to machine because of its high density but cuts cleanly without major blunting. Can be finished well and takes a high polish. Pre-boring is necessary for nails and screws. Requires care in gluing.

MECHANICAL PROPERTIES:

Massa is exceptionally hard, heavy, strong and tough.

AVAILABILITY:

Specifications stocked at Rosenfeld Kidson are: Ex100x25mm decking. Kiln-dried sawn 25mm, 40mm and 50mm thicknesses in varying fixed widths.

GRADING:

Select.

DENSITY (kg/m ³)*:	1100	
DURABILITY:	Very Durable	
STRENGTH GROUP:	S1, SD1	
MOR (MPa):	Unseasoned 117	Seasoned 177
MOE(GPa):	Unseasoned 17.8	Seasoned 21.9
JANKA(kN):	13.7	
SHRINKAGE GREEN TO 12% M.C.	Tangential 9.0	Radial 6.0



The mark of responsible forestry

*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.



STRENGTH GROUPINGS:

Minimum values for strength groups (unseasoned timber) <i>(units are Mpa = 145 lb/sq.inch)</i>			
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) <i>(units are Mpa = 145 lb/sq.inch)</i>			
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