



Tonka – *Dipteryx odorata*

OTHER NAMES: Cumaru, Shihuahuaco

REGION OF ORIGIN: South America



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GENERAL DESCRIPTION

Tonka heartwood when cut is reddish-brown or purplish-brown with lighter streaks and on exposure gradually becomes uniform light brown. Lustre is low to medium, texture is fine and grain interlocked with a waxy or oily feel. Similar to spotted gum in appearance. Tonka carries independent FSC100% certification that it is sourced from legal and well-managed forests.

MAIN USES

Primarily used in structural and heavy construction work and public space developments in applications such as boardwalks, wharfs, bridges, heavy exterior furniture, shelters and residentially for pergolas and posts etc.

WORKING PROPERTIES

Wood is difficult to work because of its density and hardness. Hard to saw and bore, but clean edges and holes can be obtained. Planes and finishes to a smooth surface. Glues adequately.

MECHANICAL PROPERTIES

Timber is extremely hard and heavy, very strong and tough. Shock resistance is high.

AVAILABILITY

Specifications stocked at Rosenfeld Kidson are: Sawn 25mm, 50mm, 75mm, 100mm, 150mm and 200mm thicknesses in varying fixed widths. Large square sections available up to 300x300mm ex stock. Larger dimensions available on request.

GRADING

Select.

DENSITY (kg/m3)*:	1070	
DURABILITY:	Very durable	
STRENGTH GROUP:	S1	
MOR (MPa):	Unseasoned 132	Seasoned 188
MOE(GPa):	Unseasoned 18.3	Seasoned 21.0
JANKA(kN):	13.7	
SHRINKAGE GREEN TO 12% M.C.	Tangential 7.0	Radial 4.0

*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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Postal Address: P O Box 621,
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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

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