

New South Wales Timbers. Torsion Tests.

Local Name.	Number and Letter.	Number of Days Seasoning.	Moisture Percentage.	Maxi. m Twisting Moment in.-lbs. eq. T.	Maxi. Shear Stress. T σ^s eq. 0.196 σ^3	Coefficient of Rigidity. 32 T. V. C eq. $\frac{\pi d^4}{32 I^2}$	$\pi d^4 \theta$	Resilience of Torsion. 16 Tyl. R eq. $\frac{\pi C d^4}{16}$	Angle of Twist in degrees per 400 inch-lbs.				Maximum Angle of Twist.
									400.	800.	1,200.	1,600.	
NORTH COAST TIMBERS.													
Blackbutt ..	1 D	824	15.8	1,440	2,180	1.36	$\times 10^5$	47.9	2.4	5.2*	..	..	16.0°
	1 D (1)	826	14.6	1,350	2,040	1.15	$\times 10^5$	44.7	2.3	5.5*	..	..	14.5°
	1 H	826	16.6	1,780	2,690	1.45	$\times 10^5$	35.3	2.1	4.6*	7.9	..	14.0°
Tallow-wood	2 D	945	14.3	1,800	2,720	1.53	$\times 10^5$	52.6	1.9	4.2	7.2	11.2	13.4°
	2 H	946	14.7	1,600	2,420	1.29	$\times 10^5$	90.0	2.2	4.5	7.8*	..	13.0°
	2 H (1)	947	14.9	1,720	2,590	1.38	$\times 10^5$	37.2	2.1	4.9*	7.9	..	14.0°
Grey Gum ..	3 D	789	15.0	1,780	2,700	1.41	$\times 10^5$	36.6	2.1	4.8*	..	..	17.0°
	3 H	788	16.9	2,390	3,620	1.76	$\times 10^5$	45.8	2.0	4.1	6.8	10.6	17.0°
	4 D	805	15.9	1,800	2,720	1.46	$\times 10^5$	35.1	2.0	4.8*	6.8	10.8	15.0°
Grey Ironbark	4 D (1)	807	15.7	2,200	3,330	1.71	$\times 10^5$	47.1	1.7	4.0	6.4	9.9	15.0°
	4 H	807	14.9	1,800	2,720	1.75	$\times 10^5$	46.0	1.6	3.6	6.1	9.3	12.0°
	6 D	863	15.5	1,700	2,680	1.25	$\times 10^5$	10.3	4.7*	8.1	13.6	..	25.0°
Blue Gum ..	6 H	859	15.6	2,070	3,130	1.15	$\times 10^5$	44.8	2.6	5.9*	11.4	..	21.0°
	6 H (1)	860	16.6	1,720	2,590	1.31	$\times 10^5$	39.2	2.6	5.1*	..	..	26.0°
	7 D	819	14.7	2,480	3,760	1.84	$\times 10^5$	28.0	2.1	4.8*	8.4	..	32.0°
Brush Box ..	7 D (1)	818	15.4	2,100	3,180	1.25	$\times 10^5$	52.1	2.3	5.5*	9.7	..	24.0°
	7 D (2)	823	14.2	2,200	3,330	1.38	$\times 10^5$	37.3	2.1	4.8	8.7	..	30.0°
	8 D	802	14.0	2,040	3,090	1.29	$\times 10^5$	62.4	2.4	5.3	8.9	..	..
Turpentine ..	8 D (1)	802	16.7	2,090	3,170	1.41	$\times 10^5$	46.2	2.3	4.9*	8.2	13.6	22.0°
	9 H	797	15.0	1,500	2,270	1.20	$\times 10^5$	42.8	2.6	5.8*	..	..	13.0°
	9 H (1)	797	15.2	1,000	1,513	0.50	$\times 10^5$	58.0	5.7	14.4	..	..	20.0°
R. Mahogany	9 H (2)	798	15.5	1,620	2,440	1.28	$\times 10^5$	40.2	2.3	4.2*	9.3	..	15.0°
	10 D	812	16.6	2,100	3,180	1.62	$\times 10^5$	31.8	1.9	5.2	6.9	..	16.0°
	10 H	810	16.9	1,900	2,880	1.45	$\times 10^5$	35.5	2.1	4.6*	7.9	12.6	17.0°
W. Mahogany	10 H (1)	810	16.6	1,400	2,120	1.25	$\times 10^5$	41.2	2.8	5.6*	9.4	..	13.0°
	10 H (2)	810	16.9	1,200	1,820	1.64	$\times 10^5$	49.1	2.0	4.3	7.4	..	12.0°
	11 H	1,036	13.9	1,800	2,720	1.66	$\times 10^5$	69.8	2.0	4.1	6.5*	9.7	11.0°
Colonial Teak	11 H (1)	1,036	12.4	2,010	3,040	1.62	$\times 10^5$	71.5	1.9	4.0	6.5*	9.9	14.0°
	SOUTH COAST TIMBERS.												
Grey Box ..	12 D	603	15.3	2,000	3,030	1.74	$\times 10^5$	29.6	1.9	4.1*	7.3	11.6	18.0°
	12 H	610	16.6	2,150	3,250	1.66	$\times 10^5$	31.0	1.9	4.1*	7.2	..	20.0°
	12 H (1)	609	16.7	2,260	3,320	1.84	$\times 10^5$	48.1	1.9	4.2	6.8	11.0	20.0°
Woollybutt ..	13 D	619	17.8	1,700	2,580	1.25	$\times 10^5$	41.2	2.3	5.2*	9.7	..	18.0°
	13 H	619	15.0	1,820	2,760	1.41	$\times 10^5$	36.5	2.1	4.8*	8.7	..	17.5°
	14 D	648	14.8	1,800	2,720	1.45	$\times 10^5$	35.5	2.1	4.6*	..	..	15.0°
Spotted Gum	14 D (1)	651	16.2	1,960	2,970	1.45	$\times 10^5$	35.5	2.1	4.5*	8.1	..	21.0°
	15 D	574	16.2	2,050	3,100	1.53	$\times 10^5$	18.9	2.1	4.9	8.4	13.6	24.0°
	15 H	575	16.8	1,560	2,360	1.20	$\times 10^5$	42.9	2.4	5.6	11.2	..	27.0°
Blackbutt ..	15 H (1)	576	14.9	2,040	3,090	1.20	$\times 10^5$	42.9	2.4	5.5*	9.7	..	24.0°
	16 D	620	15.1	1,780	2,700	1.84	$\times 10^5$	28.0	2.0	4.1*	6.9	..	12.0°
	16 H	618	16.6	1,830	2,770	1.53	$\times 10^5$	33.7	2.0	4.4*	7.7	..	13.0°
Mountain Ash	17 D	598	16.0	2,280	2,450	1.89	$\times 10^5$	42.6	1.5	3.5	5.7	9.2	16.5°
	17 H	600	16.4	1,400	2,120	1.84	$\times 10^5$	28.0	1.6	3.7*	6.6	..	19.0°
	17 H (1)	602	13.8	2,200	3,330	1.84	$\times 10^5$	28.0	1.6	3.6*	6.0	..	14.5°
Stringybark	18 D	582	12.0	1,800	2,720	1.41	$\times 10^5$	36.5	2.3	4.9*	8.7	..	17.0°
	18 D (1)	584	16.4	1,900	2,880	1.48	$\times 10^5$	13.6	2.1	4.6	7.9	12.6	17.0°
	18 H	582	16.8	1,780	2,700	1.38	$\times 10^5$	37.3	2.2	4.9*	8.6	13.5	16.0°

* Values thus are near the Elastic Limit, and have been used for T.

