

TIMBER CHARACTERISTIC STRENGTH

NZS 3603:1993 AMENDMENT 4

Structural Grades (as defined in NZS 3604:2011 Clause 1.3)

Timber properties are for dry in-service conditions $m/c = 16\%$

Timber Grade	Bending Strength f_b (MPa)	Compress. Strength f_c (MPa)	Tensile Strength f_t (MPa)	Shear Strength f_s (MPa)	Modulus of Elasticity E (GPa)	Lower Bound Modulus of Elasticity E_{lb} (GPa)
SG6	10.0	15.0	4.0	3.8*	6.0	4.0
SG8	14.0	18.0	6.0	3.8*	8.0	5.4
SG10	20.0	20.0	8.0	3.8*	10.0	6.7

* $f_s = 3.0\text{MPa}$ for Douglas Fir

Timber Sizes

Call Size	Gauged Kiln Dried Size (in mm) (Actual Size)	Rough Sawn (in mm) (Actual Size)
100 x 50	90 x 45	100 x 50
150 x 50	140 x 45	150 x 50
200 x 50	190 x 45	200 x 50
250 x 50	240 x 45	250 x 50
300 x 50	290 x 45	300 x 50
100 x 100	90 x 90	100 x 100
150 x 100	140 x 90	150 x 100
200 x 100	190 x 90	200 x 100
250 x 100	240 x 90	250 x 100
300 x 100	290 x 90	300 x 100

Note: It is common now to refer to the timber size as the Kiln Dried Size. Where the Call Size refers to the use of Rough Sawn timber the Actual Size then becomes the Call Size. The Actual Size is the size used in the design calculations.