

# Timber Properties Used in Span Table Calculations

## Dry Use

Characteristic Stresses and Elastic Moduli for Prolam (Glulam Grades)

		Characteristic Strengths (MPa)				Elastic Moduli (MPa)	
	PL Grade	Bending	Tension parallel to grain	Shear in Beam	Compression parallel to grain	Short modulus of elasticity parallel to the grain	Short duration modulus of rigidity for beams
<b>Prolam</b>	PL 12	25	12.5	3.7	29	11500	770
<b>Prolam</b>	PL 8	19	10	3.7	24	8000	530
<b>Prolam</b>	PLX20	40†/45‡	4	3.7	18	20000†/21000‡	480

† PLX20-250100

‡ PLX20-300100

Notes:

(1) PLX20 intended for use as a beam and not as a tension or compression member.

(2) PLX20 bending strength and MoE about the major axis have been determined from testing. Other properties are based on SG6 timber.

(3) For compression perpendicular to the grain, use 8.9 MPa dry and 5.3 MPa wet as per NZS 3603 for Radiata Pine for all PL grades.

(4) Higher grades (i.e. PL12, or PLX20) will give greater span and load carrying capability than PL8 for the same section size.

## Wet Use – (H5 & H3.2 treated)

Characteristic Stresses and Elastic Moduli for Prolam (Glulam Grades)

		Characteristic Strengths (MPa)			Elastic Moduli (MPa)	
PL Grade	Bending	Tension parallel to grain	Shear in Beam	Compression parallel to grain	Short modulus of elasticity parallel to the grain	Short duration modulus of rigidity for beams
PL 12	20	10	2.5	23.2	9200	610
PL 8	15.2	8.0	2.5	19.2	6400	420