

LP® SolidStart® LVL - Australia Design Values

STRUCTURAL PROPERTY		E14 (F17) LVL	E13 LVL	Units
Bending – Edge (Member Depth = 300 mm)	f'_b	42	38	MPa
Bending – Edge (Depths Other Than 300 mm)	f'_b	$42 \times (300/d)^{0.143} \leq 50.0$	$38 \times (300/d)^{0.143} \leq 45.2$	MPa
Bending – Flat	f'_b	42	38	MPa
Tension – Parallel-to-Grain	f'_t	25	25	MPa
Compression – Parallel-to-Grain	f'_c	42	31	MPa
Compression – Perpendicular-to-Grain (Edge)	f'_p	12	12	MPa
Compression – Perpendicular-to-Grain (Flat)	f'_p	7.4	7.4	MPa
Shear in Beams (Edge)	f'_s	5.3	4.6	MPa
Shear in Beams (Flat)	f'_s	3.2	3.2	MPa
Shear at Joints	f'_{sj}	5.3	5.3	MPa
Modulus of Elasticity – Edge or Flat	E	14,000	13,200	MPa
Modulus of Rigidity	G	700	660	MPa
Joint Group – Nails	Lateral-Face or Edge	JD4	JD4	N
	Withdrawal-Face or Edge	JD4	JD4	N/mm
Joint Group – Bolts	Perpendicular	JD4	JD4	N
	Parallel	JD4	JD4	N

- Notes:
- Design values in accordance with AS/NZS 4357.3-2006 and AS/NZS 4063.2-2010; effective May 1, 2011.
 - Tension parallel-to-grain design values are valid for member depths of 150 mm or less.
 - For tension parallel-to-grain in greater than 150 mm depths, multiply f'_t value by $(150 / d)^{0.167}$, where “d” is depth in millimeters.
 - Joint group classifications shown not applicable for screw connections on edge.

ATTRIBUTE	SPECIFICATION		
Veneer	Thickness	3.2 mm	
	Wood Species	Douglas Fir or Southern Yellow Pine	
	Veneer Grade	CD	
	LVL Joints	Lap, Scarf or Butt	
LVL Moisture Content	8-15% Oven Dry		
LVL Density	660 kg/m ³		
Adhesive Type & Bond	Phenol-Resorcinol Formaldehyde, Type A Bond per AS/NZ 2098.2		
Formaldehyde Emission Class	E0 per Table 1, AS/NZ 4357		
LVL Dimensional Tolerances	Length	< 7.2 m	+10 mm to +25 mm
		7.2 m to 11.7 m	+20 mm to +30 mm
		6.0 m and 12.0 m	+3.0 mm to +9.0 mm
	Depth	≤ 235 mm	-3.2 mm, +1.6 mm
		> 235 mm	± 3.2 mm
	Thickness	25 mm	± 1.6 mm
		29 mm	-2.0 mm, +1.2 mm
		32 mm	-1.8 mm, +1.3 mm
		35 mm	-1.7 mm, +1.5 mm
		38 mm	-1.5 mm, +1.7 mm
		45 mm	-2.4 mm, +1.3 mm
		63 mm	-2.6 mm, +2.6 mm
75 mm		-3.1 mm, +3.1 mm	
89 mm	-3.8 mm, +3.6 mm		