

- c) Pacific Woodtech LVL is produced at the Pacific Woodtech Corporation manufacturing plant located in Burlington, Washington, under a quality control program audited by APA.
- d) This report is subject to re-examination in one year.

7. Identification:

The Pacific Woodtech LVL described in this report is identified by a label bearing the manufacturer's name (Pacific Woodtech) and/or trademark, the APA assigned plant number (1047), the veneer species, the LVL grade, the APA-EWS logo, this report number (PR-L233), and a means of identifying the date of manufacture.

TABLE 1. ALLOWABLE STRESS DESIGN REFERENCE PROPERTIES FOR PACIFIC WOODTECH LVL [PSI] ^(a)

Species ^(b)	Grade	Beam ^(c)			Plank ^(d)			Axial		MOE ⁽ⁱ⁾
		F _b ^{(e)(g)}	F _v	F _{c⊥}	F _b ^{(f)(g)}	F _v	F _{c⊥}	F _t ^(h)	F _c ⁽ⁱ⁾	
DF	1.5E	2250	230	750	2250	150	450	1500	1950	1.5x10 ⁶
DF	1.8E	2750	285	850	2750	150	450	1850	2450	1.8x10 ⁶
DF	2.0E	3100	285	850	3100	150	450	2100	2750	2.0x10 ⁶
DF	2.4E	3550	285	850	3550	150	450	2600	3400	2.4x10 ⁶
DF+	2.4E	3550	285	850	3550	150	650	3050	3400	2.4x10 ⁶

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 lbf = 4.448 N, 1 psi = 6.9 kPa

- (a) The tabulated values apply to protected, dry service conditions. Except for modulus of elasticity (MOE) and compression perpendicular to grain (F_{c⊥}), the tabulated values are permitted to be adjusted for duration of load as provided in the code.
- (b) DF = Douglas fir; DF+ = Douglas fir core and bottom face sheets with a top face sheet of a species prescribed by the in-plant manufacturing standard.
- (c) Beam values apply to members loaded and supported on faces showing the narrow edge of all veneers, typically the narrow faces of the member.
- (d) Plank values apply to members loaded and supported on faces showing the face of one veneer, typically the wide faces of the member.
- (e) Flexural stress, F_b, for the beam orientation is based on a reference depth of 12 inches. For other depths, multiply by a size factor of $(12/d)^{1/5}$, where *d* is the depth in inches. For depths less than 1-3/4 inches, multiply by 1.47.
- (f) Flexural stress, F_b, for the plank orientation is based on a reference depth of 1-3/4 inches. For other depths, multiply by a size factor of $(1.75/d)^{1/3}$, where *d* is the depth in inches. For depths less than 1-3/4 inches, multiply by 1.00.
- (g) Flexural stress, F_b, values are permitted to be increased by 4 percent for repetitive members as provided by the code.
- (h) Tension parallel to grain, F_t, is based on a reference gage length of 4 feet. For longer lengths, multiply by a length factor of $(4/L)^{1/10}$, where L is the length in feet.
- (i) Compression parallel to grain, F_c.
- (j) Apparent modulus of elasticity. Coefficient of variation of modulus of elasticity, COV_E = 0.10.

TABLE 2. EQUIVALENT SPECIFIC GRAVITY FOR CONNECTION DESIGN

Connection Type	Face	Edge
Nail – Withdrawal	0.50	0.47
Nail – Lateral	0.50	0.50
Bolt – Lateral	0.50	N. A.

Face: member faces showing the face of one veneer, typically the wide faces of the member

Edge: member faces showing the narrow edge of all veneers, typically the narrow faces of the member

TABLE 3. MINIMUM EDGE FASTENER SPACING

LVL Dimensions	Fastener ^(a)	Minimum Spacing (inches)
Minimum 3/4-inch thick and 3-1/2-inch deep	8d Nail	3
	10d Nail	4
	12d Nail	4
	16d Nail	Not Permitted
	14 Gage Staple	4
Minimum 1-1/4-inch thick and 3-1/2-inch deep	10d Nail	4
	12d Nail	4
	16d Nail	6 ^(b)
	14 Gage Staple	4

For SI: 1 inch = 25.4 mm

(a) Nails are either common or box nails.

(b) May be 4 inches when nailing through bottom wall plate and sheathing (maximum 1-3/8-inch penetration).

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