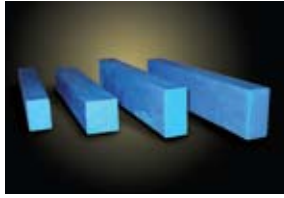


# 2.0E PWLVL

## DESIGN PROPERTIES



Growing Tomorrow's Forests Today®

[www.aboutsfi.org](http://www.aboutsfi.org)

### 2.0E PWLVL Design Properties

	Normal <sup>(1)</sup>	Formwork <sup>(2)</sup>
Modulus of Elasticity, E	2000000 psi	1800000 psi <sup>(3)</sup>
Bending, F <sub>b</sub>	3100 psi <sup>(4)</sup>	3488 psi <sup>(3)(4)(5)</sup>
Compression Parallel to Grain, F <sub>c</sub>	2750 psi	3094 psi <sup>(3)(5)</sup>
Compression Perpendicular to Grain, F <sub>c⊥</sub> (beam) <sup>(6)</sup>	850 psi	765 psi <sup>(3)</sup>
Horizontal Shear, F <sub>v</sub> (beam) <sup>(6)</sup>	285 psi	321 psi <sup>(3)(5)</sup>
Compression Perpendicular to Grain, F <sub>c⊥</sub> (plank) <sup>(7)</sup>	450 psi	405 psi <sup>(3)</sup>
Horizontal Shear, F <sub>v</sub> (plank) <sup>(7)</sup>	150 psi	169 psi <sup>(3)(5)</sup>

### DESIGN PROPERTIES<sup>(8)(9)</sup>

Depth	Width (in)															
	1½				1¾				2½				3½			
	Moment (ft-lbs)	Shear (lbs)	El x 10 <sup>6</sup> (lbs-in <sup>2</sup> )	Weight (plf)	Moment (ft-lbs)	Shear (lbs)	El x 10 <sup>6</sup> (lbs-in <sup>2</sup> )	Weight (plf)	Moment (ft-lbs)	Shear (lbs)	El x 10 <sup>6</sup> (lbs-in <sup>2</sup> )	Weight (plf)	Moment (ft-lbs)	Shear (lbs)	El x 10 <sup>6</sup> (lbs-in <sup>2</sup> )	Weight (plf)
3½"	1139	1122	10	1.4	1329	1309	11	1.6	1898	1870	16	2.3	2657	2618	23	3.2
4"	1448	1283	14	1.6	1690	1496	17	1.8	2414	2138	24	2.6	3379	2993	34	3.6
5"	2164	1603	28	1.9	2525	1870	33	2.3	3607	2672	47	3.2	5049	3741	66	4.5
5½"	2569	1763	37	2.1	2997	2057	44	2.5	4282	2939	62	3.6	5994	4115	87	5.0
6"	3005	1924	49	2.3	3505	2244	57	2.7	5008	3206	81	3.9	7011	4489	113	5.5
6½"	3470	2084	62	2.5	4049	2431	72	3.0	5784	3473	103	4.2	8097	4863	144	5.9
7½"	4224	2325	86	2.8	4928	2712	100	3.3	7040	3874	143	4.7	9856	5424	200	6.6
7½"	4490	2405	95	2.9	5238	2805	111	3.4	7483	4008	158	4.9	10476	5611	221	6.8
8"	5043	2565	115	3.1	5883	2993	134	3.6	8405	4275	192	5.2	11767	5985	269	7.3
8½"	5624	2725	138	3.3	6562	3180	161	3.9	9374	4542	230	5.5	13123	6359	322	7.7
9¼"	6549	2966	178	3.6	7640	3460	208	4.2	10915	4943	297	6.0	15281	6920	416	8.4
10"	7535	3206	225	3.9	8791	3741	263	4.5	12559	5344	375	6.5	17583	7481	525	9.1
11¼"	9315	3607	320	4.4	10868	4208	374	5.1	15525	6012	534	7.3	21735	8416	748	10.2
12"	10463	3848	389	4.7	12206	4489	454	5.5	17438	6413	648	7.8	24413	8978	907	10.9

1. Dry use (C<sub>M</sub> = 1.0), normal load duration (C<sub>D</sub> = 1.0)
2. These properties include adjustments typically used in formwork application.
3. Adjusted by a factor of C<sub>M</sub> = 0.9 for outside exposure (above ground).
4. Multiply by (12/d)<sup>0.200</sup> for depths, d, other than 12 inches.
5. Adjusted by a factor of C<sub>D</sub> = 1.25 for construction load duration.
6. Beam values apply to members loaded and supported on the member faces showing the narrow edge of all veneers, which are typically the narrow face of the member.
7. Plank values apply to members loaded and supported on the member faces showing the face of one veneer, which are typically the wide faces of the member.
8. Table values have been adjusted by a factor of C<sub>M</sub> = 0.9 for outside exposure (above ground). Moment and Shear values have been further adjusted by a factor of C<sub>D</sub> = 1.25 for construction load duration.
9. Table values apply only to members loaded and supported on the member faces showing the narrow edge of all veneers (beam orientation).