

Allowable Total Loads for Beams Supporting Floors

Spruce - Pine -Fir																
Span in Feet	2 x 6				2 x 8				2 x 10				2 x 12			
	$f_b = 1310$ psi				$f_b = 1210$ psi				$f_b = 1105$ psi				$f_b = 1005$ psi			
	Number of Members				Number of Members				Number of Members				Number of Members			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
4	1436	2871	4954	6605	2304	4608	7950	10600	3426	6852	11819	15758	4609	9218	15900	21199
5	1149	2297	3963	5284	1843	3686	6360	8480	2741	5482	9455	12606	3687	7374	12720	16960
6	957	1914	3303	4403	1536	3072	5300	7067	2284	4568	7879	10505	3073	6145	10600	14133
7	820	1641	2831	3774	1317	2633	4543	6057	1958	3916	6753	9005	2634	5267	9085	12114
8	718	1436	2477	3303	1152	2304	3975	5300	1713	3426	5909	7879	2305	4609	7950	10600
9	638	1276	1997	2663	1024	2048	3533	4711	1523	3045	5253	7004	2048	4097	7066	9422
10	539	1078	1618	2157	922	1843	3180	4240	1370	2741	4727	6303	1844	3687	6360	8480
11	446	891	1337	1782	838	1676	2891	3855	1246	2492	4298	5730	1676	3352	5782	7709
12	374	749	1123	1498	768	1536	2573	3431	1142	2284	3940	5253	1536	3073	5300	7066
13	319	638	957	1276	709	1418	2192	2923	1054	2108	3636	4849	1418	2836	4892	6523
14	275	550	825	1100	630	1260	1890	2520	979	1958	3377	4502	1317	2634	4543	6057
15	240	479	719	959	549	1098	1647	2196	914	1827	3152	4202	1229	2458	4240	5653
16	211	421	632	842	482	965	1447	1930	857	1713	2955	3940	1152	2305	3975	5300
17	187	373	560	746	427	855	1282	1709	806	1612	2663	3550	1084	2169	3741	4988
18	166	333	499	666	381	762	1144	1525	761	1523	2375	3167	1024	2048	3533	4711
19	149	299	448	597	342	684	1026	1368	710	1421	2131	2842	970	1941	3347	4463
20	135	270	404	539	309	617	926	1235	641	1282	1924	2565	922	1844	3180	4240
21	122	245	367	489	280	550	840	1120	582	1163	1745	2326	878	1756	3028	4038
22	111	223	334	446	255	510	765	1021	530	1060	1590	2120	838	1676	2860	3813
23	102	204	306	408	233	467	700	934	485	970	1455	1939	802	1603	2617	3489
24	94	187	281	374	214	429	643	858	445	891	1336	1781	768	1536	2403	3204
25	86	173	259	345	198	395	593	790	410	821	1231	1642	737	1475	2215	2953

NOTES:

1. The values shown for f_b are for repetitive use members of No. 2 Grade. When only one or two members make up a beam, non-repetitive f_b values are used.
2. Beams are assumed to be simple beams with uniformly distributed load.
3. When plywood flitch plates are used, add 7% to the values indicated.
4. For beams supporting floors, see "Allowable Total Loads for Beams Supporting FLOORS".
5. Deflection is limited to $L/240$.

Allowable Total Loads for Beams Supporting Roofs

Spruce - Pine -Fir																
Span in Feet	2 x 6				2 x 8				2 x 10				2 x 12			
	$f_b = 1505 \text{ psi}$				$f_b = 1390 \text{ psi}$				$f_b = 1275 \text{ psi}$				$f_b = 1155 \text{ psi}$			
	Number of Members				Number of Members				Number of Members				Number of Members			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
4	1650	3300	5691	7588	2648	5296	9133	12177	3954	7908	13637	18182	5295	10589	18273	24364
5	1320	2640	4553	6071	2118	4237	7306	9742	3163	6326	10909	14546	4236	8471	14618	19491
6	1100	2200	3794	5059	1765	3531	6089	8118	2636	5272	9091	12122	3530	7059	12182	16242
7	943	1886	3252	4336	1513	3026	5219	6958	2259	4519	7792	10390	3025	6051	10442	13922
8	825	1650	2846	3794	1324	2648	4566	6089	1977	3954	6818	9091	2647	5295	9136	12182
9	733	1467	2529	3373	1177	2354	4059	5412	1757	3514	6061	8081	2353	4706	8121	10828
10	660	1320	2276	3035	1069	2118	3653	4871	1582	3163	5455	7273	2118	4236	7309	9745
11	600	1200	2005	2674	963	1926	3321	4428	1438	2875	4959	6612	1925	3851	6645	8859
12	550	1100	1685	2247	883	1765	3044	4059	1318	2636	4546	6061	1765	3530	6091	8121
13	479	957	1436	1914	815	1629	2810	3747	1217	2433	4196	5595	1629	3258	5622	7496
14	413	825	1238	1651	757	1513	2609	3479	1130	2259	3896	5195	1513	3025	5221	6961
15	359	719	1078	1438	706	1412	2435	3247	1054	2109	3636	4849	1412	2824	4873	6497
16	316	632	948	1264	662	1324	2171	2894	988	1977	3409	4546	1324	2647	4568	6091
17	280	560	840	1119	623	1246	1923	2564	930	1861	3209	4278	1246	2492	4299	5733
18	250	499	749	998	572	1143	1715	2287	879	1757	3030	4041	1177	2353	4061	5414
19	224	448	672	896	513	1026	1539	2053	832	1665	2871	3828	1115	2229	3847	5129
20	202	404	607	809	463	926	1389	1852	791	1582	2727	3636	1059	2118	3655	4873
21	183	367	550	734	420	840	1260	1680	753	1506	2597	3463	1008	2017	3481	4641
22	167	334	501	668	383	765	1148	1531	719	1438	2385	3180	963	1925	3322	4430
23	153	306	459	612	350	700	1051	1401	688	1375	2182	2909	921	1842	3178	4237
24	140	281	421	562	322	643	965	1286	659	1318	2004	2672	882	1765	3045	4061

NOTES:

1. The values shown for f_b are for repetitive use members of No. 2 Grade. When only one or two members make up a beam, non-repetitive f_b values are used.
2. Beams are assumed to be simple beams with uniformly distributed load.
3. When plywood flitch plates are used, add 7% to the values indicated.
4. For beams supporting roofs, see "Allowable Total Loads for Beams Supporting ROOFS".
5. Deflection is limited to $L/360$.