

Floor Loads

SIMPLE- OR MULTIPLE-SPAN JOIST-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 20						PWI 45							
	9½"		11½"		14"		9½"		11½"		14"		16"	
	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%
6	-	265	-	265	-	265	-	299	-	300	-	300	-	300
7	-	227	-	227	-	227	-	256	-	257	-	257	-	257
8	-	199	-	199	-	199	-	224	-	225	-	225	-	225
9	-	177	-	177	-	177	-	199	-	200	-	200	-	200
10	139	159	-	159	-	159	177	179	-	180	-	180	-	180
11	107	145	-	145	-	145	137	163	-	164	-	164	-	164
12	84	133	-	133	-	133	108	149	-	150	-	150	-	150
13	67	119	113	122	-	122	87	138	-	138	-	138	-	138
14	54	103	92	114	-	114	71	128	117	129	-	129	-	129
15	45	89	76	106	-	106	58	116	96	120	-	120	-	120
16	37	74	63	100	91	100	48	97	81	113	-	113	-	113
17			53	90	77	94			68	106	98	106	-	106
18			45	81	66	88			58	100	83	100	-	100
19			39	72	56	84			50	95	72	95	-	95
20			33	65	48	78			43	86	62	90	83	90
21					42	71					54	86	73	86
22					37	64					47	82	64	82
23					32	59					42	78	56	78
24					29	54					37	71	50	75
25													44	72
26													40	69
27													35	65
28													32	60
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Notes:

1. Table values apply to uniformly loaded floor joists.
2. Span is measured to the center of each support.
3. The values in the Total columns are based on an L/240 total load deflection limit. Building codes typically require L/360 for live load. Experience has shown that a live load deflection limit of L/480 at 40 psf for residential floors does a better job than L/360 of meeting most performance expectations.
4. Table values do not account for stiffness added by glued or nailed sheathing.
5. Provide at least 1¾" of bearing length at end supports and 3½" at intermediate supports.
6. Provide lateral restraint at supports (e.g. blocking panels, rim board) and along the compression flange of each joist (e.g. floor sheathing, gypsum board ceiling).
7. Use sizing software or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing lengths, concentrated loads) or for multiple span joists if the length of any span is less than half the length of an adjacent span.

Floor Loads

SIMPLE- OR MULTIPLE-SPAN JOIST-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 47								PWI 50							
	9½"		11½"		14"		16"		9½"		11½"		14"		16"	
	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%
6	-	248	-	257	-	266	-	275	-	272	-	272	-	272	-	272
7	-	213	-	221	-	228	-	235	-	233	-	233	-	233	-	233
8	-	186	-	193	-	200	-	206	-	204	-	204	-	204	-	204
9	-	165	-	172	-	177	-	183	-	181	-	181	-	181	-	181
10	-	149	-	154	-	160	-	165	-	163	-	163	-	163	-	163
11	-	135	-	140	-	145	-	150	133	148	-	148	-	148	-	148
12	115	124	-	129	-	133	-	137	105	136	-	136	-	136	-	136
13	92	114	-	119	-	123	-	127	84	126	-	126	-	126	-	126
14	75	106	-	110	-	114	-	118	68	117	114	117	-	117	-	117
15	62	99	100	103	-	106	-	110	56	109	94	109	-	109	-	109
16	51	93	84	97	-	100	-	103	47	94	79	102	-	102	-	102
17			71	91	-	94	-	97			66	96	-	96	-	96
18			60	86	85	89	-	92			57	91	82	91	-	91
19			51	81	73	84	-	87			48	86	71	86	-	86
20			44	77	64	80	-	82			42	82	61	82	-	82
21					55	76	74	78					53	78	73	78
22					48	73	65	75					47	74	64	74
23					43	69	57	72					41	71	56	71
24					38	67	50	69					36	68	50	68
25							45	66							44	65
26							40	63							39	63
27							36	61							35	60
28							32	59							32	58
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See notes on page 20

Floor Loads

SIMPLE- OR MULTIPLE-SPAN JOIST-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 60								PWI 70									
	9½"		11½"		14"		16"		11½"		14"		16"		18"		20"	
	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%
6	-	299	-	311	-	311	-	311	-	328	-	328	-	328	-	328	-	328
7	-	256	-	266	-	266	-	266	-	281	-	281	-	281	-	281	-	281
8	-	224	-	233	-	233	-	233	-	246	-	246	-	246	-	246	-	246
9	-	199	-	207	-	207	-	207	-	219	-	219	-	219	-	219	-	219
10	-	179	-	186	-	186	-	186	-	197	-	197	-	197	-	197	-	197
11	160	163	-	169	-	169	-	169	-	179	-	179	-	179	-	179	-	179
12	127	149	-	155	-	155	-	155	-	164	-	164	-	164	-	164	-	164
13	102	138	-	143	-	143	-	143	-	151	-	151	-	151	-	151	-	151
14	83	128	-	133	-	133	-	133	-	141	-	141	-	141	-	141	-	141
15	68	119	113	124	-	124	-	124	124	131	-	131	-	131	-	131	-	131
16	57	112	95	117	-	117	-	117	104	123	-	123	-	123	-	123	-	123
17			80	110	-	110	-	110	88	116	-	116	-	116	-	116	-	116
18			68	104	98	104	-	104	75	109	107	109	-	109	-	109	-	109
19			59	98	85	98	-	98	64	104	92	104	-	104	-	104	-	104
20			51	93	73	93	-	93	56	98	80	98	-	98	-	98	-	98
21					64	89	86	89			70	94	93	94	-	94	-	94
22					56	85	75	85			61	89	82	89	-	89	-	89
23					49	81	67	81			54	86	72	86	-	86	-	86
24					44	78	59	78			48	82	64	82	-	82	-	82
25							53	75					57	79	73	79	-	79
26							47	72					51	76	66	76	-	76
27							42	69					46	73	59	73	-	73
28							38	67					41	70	53	70	67	70
29															48	68	61	68
30															44	66	55	66
31															40	63	50	63
32																	46	62
33																	42	60
34																	38	58
35																	35	56
36																		
37																		
38																		
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Floor Loads

SIMPLE- OR MULTIPLE-SPAN JOIST-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 77														PWI 90																		
	9½"		11½"		14"		16"		18"		20"		22"		24"		9½"		11½"		14"		16"		18"		20"		22"		24"		
	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	
6	-	359	-	359	-	359	-	359	-	359	-	359	-	550	-	550	-	381	-	447	-	447	-	447	-	447	-	447	-	614	-	614	
7	-	308	-	308	-	308	-	308	-	308	-	308	-	471	-	471	-	327	-	383	-	383	-	383	-	383	-	383	-	526	-	526	
8	-	270	-	270	-	270	-	270	-	270	-	270	-	413	-	413	-	286	-	336	-	336	-	336	-	336	-	336	-	461	-	461	
9	-	240	-	240	-	240	-	240	-	240	-	240	-	367	-	367	-	254	-	298	-	298	-	298	-	298	-	298	-	409	-	409	
10	-	216	-	216	-	216	-	216	-	216	-	216	-	330	-	330	-	229	-	268	-	268	-	268	-	268	-	268	-	368	-	368	
11	183	196	-	196	-	196	-	196	-	196	-	196	-	300	-	300	-	208	-	244	-	244	-	244	-	244	-	244	-	335	-	335	
12	145	180	-	180	-	180	-	180	-	180	-	180	-	275	-	275	-	191	-	224	-	224	-	224	-	224	-	224	-	307	-	307	
13	116	166	-	166	-	166	-	166	-	166	-	166	-	254	-	254	165	176	-	206	-	206	-	206	-	206	-	206	-	283	-	283	
14	95	154	-	154	-	154	-	154	-	154	-	154	-	236	-	236	135	163	-	192	-	192	-	192	-	192	-	192	-	263	-	263	
15	78	144	128	144	-	144	-	144	-	144	-	144	-	220	-	220	112	153	-	179	-	179	-	179	-	179	-	179	-	246	-	246	
16	65	130	107	135	-	135	-	135	-	135	-	135	-	206	-	206	94	143	152	168	-	168	-	168	-	168	-	168	-	230	-	230	
17			90	127	-	127	-	127	-	127	-	127	-	194	-	194			129	158	-	158	-	158	-	158	-	158	-	217	-	217	
18			77	120	110	120	-	120	-	120	-	120	-	183	-	183			110	149	-	149	-	149	-	149	-	149	-	205	-	205	
19			66	113	95	113	-	113	-	113	-	113	-	174	-	174			95	141	135	141	-	141	-	141	-	141	-	194	-	194	
20			57	108	82	108	-	108	-	108	-	108	-	165	-	165			82	134	117	134	-	134	-	134	-	134	-	184	-	184	
21					71	103	96	103	-	103	-	103	-	157	-	157					102	128	-	128	-	128	-	128	-	175	-	175	
22					63	98	84	98	-	98	-	98	-	150	-	150					90	122	119	122	-	122	-	122	-	167	-	167	
23					55	94	74	94	-	94	-	94	-	143	-	143					79	117	106	117	-	117	-	117	-	160	-	160	
24					49	90	66	90	85	90	-	90	130	138	-	138					71	112	94	112	-	112	-	112	-	154	-	154	
25						58	86	75	86	-	86	116	132	-	132								84	107	-	107	-	107	-	147	-	147	
26						52	83	68	83	-	83	104	127	125	127								75	103	96	103	-	103	-	142	-	142	
27						47	80	61	80	76	80	94	122	113	122								67	99	87	99	-	99	132	136	-	136	
28						42	77	55	77	69	77	84	118	102	118								61	96	78	96	-	96	119	132	-	132	
29							49	74	62	74	76	114	92	114											71	93	89	93	108	127	-	127	
30							45	72	56	72	69	110	84	110											64	89	81	89	99	123	118	123	
31							41	70	51	70	63	104	76	106											59	87	74	87	90	119	108	119	
32								47	67	58	98	70	103														67	84	82	115	99	115	
33								43	65	53	92	64	100														62	81	75	112	91	112	
34								39	63	48	87	59	94														57	79	69	108	83	108	
35								36	62	45	82	54	89														52	77	64	105	77	105	
36											41	77	50	84															59	102	71	102	
37											38	73	46	80															54	100	66	100	
38											35	69	42	76														50	97	61	97		
39													39	72																56	94		
40													37	68																52	92		
41													34	65																49	90		
42													32	62																46	88		

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