

MIT OpenCourseWare
<http://ocw.mit.edu>

21M.606 Introduction to Stagecraft
Spring 2009

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.

Weight and Dimensions of Common Theatrical Lumber

1. Eastern White Pine
Specific Gravity .38
Lbs./Cu.Ft. 23.75

2. Douglas Fir
Specific Gravity .51
Lbs./Cu.Ft. 31.9

3. Spruce
Specific Gravity .38
Lbs./Cu.Ft. 23.75

Nominal size BxH	Actual size BxH	Pine weight/ lin. ft.	Fir weight/ lin. ft.	Spruce weight/ lin. ft.
1 x 1	3/4"x3/4"	.093	.166	.093
1 x 2	3/4"x1 1/2"	.186	.249	.186
1 x 3	3/4"x2 1/2"	.309	.415	.309
1 x 4	3/4"x3 1/2"	.433	.582	.433
1 x 6	3/4"x5 1/2"	.680	.914	.680
1 x 8	3/4"x7 1/4"	.897	1.204	.897
1 x 10	3/4"x9 1/4"	1.144	1.537	1.144
1 x 12	3/4"x11 1/4"	1.392	1.869	1.392
<hr/>				
5/4 x 2	1" x1 1/2"	.247	.332	.247
5/4 x 3	1" x2 1/2"	.412	.554	.412
5/4 x 4	1" x3 1/2"	.577	.775	.577
5/4 x 6	1" x5 1/2"	.907	1.218	.907
5/4 x 8	1" x7 1/4"	1.196	1.606	1.196
5/4 x 10	1" x9 1/4"	1.526	2.049	1.526
5/4 x 12	1" x11 1/4"	1.855	2.492	1.855
<hr/>				
2 x 2	1 1/2"x1 1/2"	.371	.498	.371
2 x 3	1 1/2"x2 1/2"	.618	.831	.618
2 x 4	1 1/2"x3 1/2"	.866	1.163	.866
2 x 6	1 1/2"x5 1/2"	1.361	1.828	1.361
2 x 8	1 1/2"x7 1/4"	1.794	2.409	1.794
2 x 10	1 1/2"x9 1/4"	2.288	3.074	2.288
2 x 12	1 1/2"x11 1/4"	2.783	3.738	2.783

5. The formula used to derive this chart:

$$B \times W \times 12 (\text{sp. gr.} \times 62.5 / 1728) = \text{Unit Weight}$$

B=breadth in inches

W=width in inches

sp. gr. =Specific Gravity of species

Unit Weight=weight of one linear foot of lumber