

Technical Note

Weights of Building Materials - Pounds Per Square Foot [PSF]

<u>CEILING</u>		FLOOR (cont.)	
Acoustical fiber board (1)	1	Hardwood flooring, 7/7-in (1)	4
Suspended steel channel system (1)	2	1/4" linoleum or asphalt tile (1)	1
Suspended wood channel system	2.5	BCI/AJS [®] joists @ 16" o.c., 3/4"	10
2x8 ceiling joists @ 16" o.c., R-49	7	sheathing, 1/2" gypsum board	
insulation, 1/2" gypsum board	•	3/4" Gyp-Crete® topping	6.5
1" Plaster	8	Carpet & Pad	2.0
1/2" gypsum board (1)	2.2	Waterproofing Membranes	
5/8" gypsum board (1)	2.75	Bituminous, smooth surface (1)	1.5
		Liquid applied ⁽¹⁾	1
ROOF			
Fiberglass shingles	3	SHEATHING	
Asphalt shingles (1)	2	11/32" or 3/8" Plywood – OSB ⁽³⁾	1.0 - 1.2
Wood shingles (1)	3	15/32" or 1/2" Plywood - OSB ⁽³⁾	1.4 - 1.7
Spanish clay tile (1)	19	19/32" or 5/8" Plywood - OSB ⁽³⁾	1.8 - 2.1
Concrete roof tile	12	23/32" or 3/4" Plywood - OSB ⁽³⁾	2.2 - 2.5
Composition Roofing:		7/8" Plywood - OSB ⁽³⁾	2.6 - 2.9
Three-ply ready roofing (1)	1	1 1/8" Plywood - OSB ⁽³⁾	3.3 - 3.6
Four-ply felt and gravel (1)	5.5	1/2" cementitious backerboard	3 4.6
Five-ply felt and gravel (1)	6	1-1/2" softwood T & G decking	4.0
20 gage metal deck (1)	2.5	FRAMING	
18 gage metal deck (1)	3	2x4 @ 16" o.c.	1.1
0.05" thick polyvinyl chloride polymer	0.35	2x6 @ 16" o.c.	1.7
membrane ⁽⁴⁾		2x8 @ 16" o.c.	2.2
1" fiberglass batt insulation	0.04	2x10 @ 16" o.c.	2.9
1" loose fiberglass insulation	0.04	2x12 @ 16" o.c.	3.5
1" loose cellulose insulation	0.14	BCI [®] 4500s, 5000 or 5000s @ 12" o.c.	2.0 – 2.9
1" rigid insulation (1)	1.5	BCI [®] 4500s, 5000 or 5000s @ 16" o.c.	1.5 – 2.2
Blowing wool insulation R-38 (16"deep)	0.62	BCI [®] 4500s, 5000 or 5000s @ 19.2" o.c.	1.3 - 2.8
3/16" slate ⁽¹⁾ 1/4" slate ⁽¹⁾	7	BCI [®] 4500s, 5000 or 5000s @ 24" o.c	1.0 - 1.5
Single-ply (no ballast) (1)	10 0.7	BCI [®] 6000 or 6000s @ 12" o.c.	2.2 - 3.4
Single-ply (no ballast) Single-ply (ballasted)	11	BCI [®] 6000 or 6000s @ 16" o.c.	1.7 - 2.6
Dry gravel (1)	8.7	BCI [®] 6000 or 6000s @19.2" o.c.	1.4 - 2.1
2x8 rafters @ 16" o.c., fiberglass	8	BCI [®] 6000 or 6000s @ 24" o.c.	1.1 - 1.7
shingles, 15# felt, 3/8" sheathing	O	BCl [®] 60, 60s, 6500 or 6500s @ 12" o.c.	2.3 - 3.8
Skylight: metal frame w/ 3/8" wire glass (1)	8	BCl [®] 60, 60s, 6500 or 6500s @ 16" o.c.	1.7 - 2.9
Skylighti motal mamo ti/ s/o timo glass	Ü	BCI [®] 60, 60s, 6000 or 6500s @19.2" o.c.	1.4 - 2.4
<u>FLOOR</u>		BCI [®] 60, 60s, 6500 or 6500s @ 24" o.c.	1.2 - 1.9
1" reinforced regular weight concrete	12.5	BCI [®] 90 or 90s @ 12" o.c.	3.9 - 4.9
1" plain lightweight concrete (1)	8	BCI [®] 90 or 90s @ 16" o.c.	2.9 - 3.7
7/16" cementitious backerboard	3	BCI [®] 90 or 90s @ 19.2" o.c.	2.4 - 3.1
Ceramic or guarry tile (3/4") on 1/2"	16	BCI [®] 90 or 90s @ 24" o.c.	1.9 – 2.5
mortar bed (1)		AJS [®] 140, 150, 190 or 20 @ 12" o.c.	2.2 - 3.3
Ceramic or quarry tile (3/4") on 1" mortar	23	AJS [®] 140, 150, 190 or 20 @ 16" o.c.	1.7 – 2.5
bed ⁽¹⁾		AJS [®] 140, 150, 190 or 20 @ 19.2" o.c. AJS [®] 140, 150, 190 or 20 @ 24" o.c.	1.4 – 2.1
1" mortar bed	12	AJS 140, 150, 190 or 20 @ 24 o.c. AJS [®] 25 or 30 @ 12" o.c.	1.1 - 1.7 $3.1 - 3.9$
1" slate ⁽¹⁾	15	AJS 25 or 30 @ 12 o.c. AJS 25 or 30 @ 16" o.c.	3.1 – 3.9 2.3 – 2.9
3/8" marble tile	6	AJS [®] 25 or 30 @ 19.2" o.c.	2.3 – 2.9 1.9 – 2.4
3/8" ceramic floor tile (1)	4.7	AJS [®] 25 or 30 @ 24" o.c.	1.6 - 2.4
		7.00 LO 01 00 @ LT 0.0.	1.0 2.0



Technical Note

5/16" x 7-1/2" fiber cement lap siding 4" clay brick (1) 1/4" ceramic wall tile (1) 3.1 3/4" Cultured Stone® 12 2x4 studs @ 16" o.c., 5/8" gypsum, 11 insulation, 3/8" siding (1) 2x6 studs @ 16" o.c., 5/8" gypsum, 12 insulation, 3/8" siding (1) Wood or steel studs, 1/2" gypsum board each side (1) Exterior stud walls w/ brick veneer (1) Exterior stud walls w/ brick veneer (1) 8 Windows: glass, frame and sash (1) 8 Stucco 10 Log Wall: 10" diameter 26 Glass Block 4" thick - standard (hollow) 3" thick - standard (hollow) 4" thick - thick face 3" thick - solid glass block MISCELLANEOUS 1" of sand 8 5.2 (2)	WALL	
1/4" ceramic wall tile (1) 3.1 1 3/4" Cultured Stone® 12 2x4 studs @ 16" o.c., 5/8" gypsum, 11 insulation, 3/8" siding (1) 12 2x6 studs @ 16" o.c., 5/8" gypsum, 12 insulation, 3/8" siding (1) 12 Wood or steel studs, 1/2" gypsum board each side (1) 8 Exterior stud walls w/ brick veneer (1) 48 Windows: glass, frame and sash (1) 8 Stucco 10 Log Wall: 10" diameter 26 Glass Block 4" thick - standard (hollow) 20 3" thick - standard (hollow) 16 4" thick - thick face 30 3" thick - solid glass block 40 MISCELLANEOUS 1" of sand 8 1" of water 5.2	5/16" x 7-1/2" fiber cement lap siding	3
1 3/4" Cultured Stone® 12 2x4 studs @ 16" o.c., 5/8" gypsum, 11 insulation, 3/8" siding (1) 2x6 studs @ 16" o.c., 5/8" gypsum, 12 insulation, 3/8" siding (1) Wood or steel studs, 1/2" gypsum board each side (1) Exterior stud walls w/ brick veneer (1) 8 Glass Block Unit of identification of the properties o	4" clay brick (1)	39
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Windows: glass, frame and sash (1) 8 Stucco 10 Log Wall: 10" diameter 26 Glass Block 20 4" thick - standard (hollow) 16 4" thick - standard (hollow) 16 4" thick - thick face 30 3" thick - solid glass block 40 MISCELLANEOUS 1" of sand 8 1" of water 5.2		
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MISCELLANEOUS 1" of sand 8 1" of water 5.2		
1" of sand 8 1" of water 5.2	3" thick - solid glass block	40
1" of sand 8 1" of water 5.2	MISCELLANEOUS	
1" of water 5.2		8
		5.2
Hay: baled (dry) (2)	Hay: baled (dry) (2)	15 PCF ⁽²⁾
Straw: baled (dry) (2) 8 PCF ⁽²⁾	Straw: baled (dry) (2)	
	Saturated soil (garden/landscaped roof)	135 PCF
Catalatoa con (garacinianaccapca roci)	Grand Piano	1000 LB
1 /	Grand Piano	1000 LB

Include at least 1.5 psf in all dead load summations to account for incidentals such as plumbing, ducts, light fixtures, etc.

- (1) Minimum Design Loads for Buildings and Other Structures, ASCE 7-05.
- (2) National Farm Building Code (Canada) 1995. Value in pounds per cubic foot (PCF), multiply by maximum height to obtain PSF.
- (3) Approximate Engineering Dead Load Weight of Wood Structural Panels, APA EWS TT-019. 1998.
- (4) Duro-Last General Specifications, Duro-Last Roofing, Inc. 2005