ADDENDA

ANSI/ASHRAE/IES Addendum cm to
ANSI/ASHRAE/IES Standard 90.1-2013

Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by the ASHRAE Standards Committee on August 24, 2016; by the ASHRAE Tech Council on August 29, 2016; by the IES Board of Directors on September 26, 2016; and by the American National Standards Institute on August 30, 2016.

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FOREWORD

This addendum clarifies and simplifies the default U-factors within Appendix A for wood panels and wood subfloors, corrects the dimensional lumber sizes in the tables, and reorganizes the material list by putting similar materials together.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes.]

Addendum cm to 90.1-2013

Modify the standard as follows (I-P and SI):

TABLE A9.4.3-1 R-Values of Building Materials (I-P)

Material	~~Nominal Size, in.~~	Actual Size, in.	R-Value
Carpet and rubber pad	—	–	1.23
Concrete at R-0.0625	—	2	0.13
	—	4	0.25
	—	6	0.38
	—	8	0.5
	—	10	0.63
	—	12	0.75
~~Flooring, wood subfloor~~	~~—~~	~~0.75~~	~~0.94~~
Gypsum board	—	0.5	0.45
	—	0.625	0.56
Metal deck	—	—	0
Roofing, built-up	—	0.375	0.33
~~Sheathing, vegetable fiber board, 0.78 in.~~	~~—~~	~~0.78~~	~~2.06~~
Soil at R-0.104/in.	—	12	1.25
Steel, mild		1	0.0031807
Stucco	—	0.75	0.08

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Wood panels 7/16 in.		0.438	0.62
Wood subfloor	—	0.75	0.94
Wood, 2 × 4 at R-1.25/in.	~~4~~	3.5	4.38
Wood, 2 × 6 at R-1.25/in.	~~6~~	5.5	6.88
Wood, 2 × 8 at R-1.25/in.	~~8~~	7.25	9.06
Wood, 2 × 10 at R-1.25/in.	~~10~~	9.25	11.56
Wood, 2 × 12 at R-1.25/in.	~~12~~	11.25	14.06
Wood, 2 × 14 at R-1.25/in.	~~14~~	13.25	16.56

TABLE A9.4.3-1 R-Values of Building Materials (SI)

Material	~~Nominal Size, mm.~~	Actual Size, mm.	R-Value
Carpet and rubber pad	—	–	0.22
Concrete at R-0.000434/mm	—	50	0.02
	—	100	0.04
	—	150	0.07
	—	200	0.09
	—	250	0.11
	—	300	0.13
~~Flooring, wood subfloor~~	~~—~~	~~19~~	~~0.17~~
Gypsum board	—	13	0.08
	—	16	0.10
Metal deck	—	—	0
Roofing, built-up	—	9.5	0.06
~~Sheathing, vegetable fiber board, 20 mm~~	~~—~~	~~20~~	0.36
Soil at R-0.000723/mm	—	300	0.22
Steel, mild	—	25.4	0.0005601
Stucco	—	19	0.01
Wood panels 11 mm		11	0.11
Wood subfloor		19	0.17

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Wood, 50 × 100 at R-0.0087/mm	~~100~~	89	0.77
Wood, 250 × 150 at R-0.0087/mm	~~150~~	140	1.21
Wood, 250 × 200 at R-0.0087/mm	~~200~~	184	1.60
Wood, 250 × 250 at R-0.0087/mm	~~250~~	235	2.04
Wood, 250 × 300 at R-0.0087/mm	~~300~~	286	2.48
Wood, 250 × 350 at R-0.0087/mm	~~350~~	337	2.92

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As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

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ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

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