

# ADDENDA

**ANSI/ASHRAE/IES Addendum cg to  
ANSI/ASHRAE/IES Standard 90.1-2019**

# Energy Standard for Buildings Except Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on April 29, 2022, and by the Illuminating Engineering Society on April 27, 2022.

This addendum was approved by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. Instructions for how to submit a change can be found on the ASHRAE® website (<https://www.ashrae.org/continuous-maintenance>).

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- participation in the next review of the Standard,
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## FOREWORD

Addendum cg adds a definition for insulated metal panels (IMPs) and adds a new Section A9.4.7 that clarifies how the U-factor of a given IMP is determined.

Current 90.1 compliance paths treat structure, cladding, insulation, and building materials as separate products, which results in multiple potential compliance paths for multifunction products such as IMPs, each possibly with a different determination. Addendum cg provides clarity by highlighting a single path consistent with industry practices for IMPs

**Note:** In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striking through~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

### Addendum cg to Standard 90.1-2019

**Modify Section 3.2 as shown (I-P and SI).**

**insulated metal panel:** a factory manufactured panel consisting of metal facings, an insulative core, and a panel joint intended for use in an assembly forming an exterior wall, an exterior wall covering, or a roof covering of a building envelope.

**Modify Section 5 as shown (I-P and SI).**

**5.5.3.1 Roofs~~Insulation~~.** All roofs shall comply with the insulation values specified in Tables 5.5-0 through 5.5-8. Skylight curbs shall be insulated to the level of roofs with insulation entirely above deck or R-5.0 (R-0.9), whichever is less.

[ ... ]

**5.5.3.1.2 Insulated Metal Panels.** The U-factor of roof assemblies which include insulated metal panels shall not be greater than the U-factors of Tables 5.5-0 through 5.5-8 for the applicable class of construction. U-factors of insulated metal panels shall be determined in accordance with Section A9.4.7.

[ ... ]

**5.5.3.2 Above Grade Walls~~Insulation~~.** All above-grade walls shall comply with the insulation values specified in Tables 5.5-0 through 5.5-8.

[ ... ]

**5.5.3.2.3 Insulated Metal Panels.** The U-factor of wall assemblies that include insulated metal panels shall not be greater than the U-factors of Tables 5.5-0 through 5.5-8 for the applicable class of construction. U-factors of insulated metal panels shall be determined in accordance with Section A9.4.7.

[ ... ]

#### 5.5.3.4 Floors~~Insulation~~

**5.5.3.4.1 Floor Insulation.** All floors shall comply with the insulation values specified in Tables 5.5-0 through 5.5-8.

**5.5.3.4.2 Insulated Metal Panels.** The U-factor of floor assemblies that include insulated metal panels shall not be greater than the U-factors of Tables 5.5-0 through 5.5-8 for the applicable class of construction. U-factors of insulated metal panels shall be determined in accordance with Section A9.4.7.

[ ... ]

#### 5.5.3.5 Slabs-on-Grade~~Insulation~~ [ ... ]

**Modify Normative Appendix A as shown (I-P and SI).**

**A9.4.7 Insulated Metal Panels.** U-factors of insulated metal panels shall be determined by two- or three-dimensional finite difference or finite volume computer models or by testing in accordance with Section A9.3.2 and shall include panel side joints.

## **POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES**

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

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.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

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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As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

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