



ADDENDA

**ANSI/ASHRAE Addendum j to
ANSI/ASHRAE Standard 15-2019**

Safety Standard for Refrigeration Systems

Approved by ASHRAE and the American National Standards Institute on October 30, 2020.

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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ASHRAE Standing Standard Project Committee 15

Cognizant TCs: 10.1, Custom Engineered Refrigeration Systems, and 9.1, Large Building Air-Conditioning Systems

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FOREWORD

Addendum j modifies ANSI/ASHRAE Standard 15 by replacing the terms “flammable” and “nonflammable” with refrigerant class when referencing refrigerants classified as A1 or B1 by ANSI/ASHRAE Standard 34.

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

Addendum j to Standard 15-2019

Modify Section 7 as shown. The remainder of Section 7 remains unchanged.

7. RESTRICTIONS ON REFRIGERANT USE

[. . .]

7.4.2 ~~Nonflammable Class 1~~ Refrigerants. [. . .]

7.4.3 ~~Flammable Class 2L, Class 2 and Class 3~~ Refrigerants. [. . .]

Modify Section 9 as shown. The remainder of Section 9 remains unchanged.

9. DESIGN AND CONSTRUCTION OF EQUIPMENT AND SYSTEMS

[. . .]

9.14.1.1 Testing Procedure. Tests shall be performed with dry nitrogen or nonflammable, nonreactive, dried gas. Oxygen, air, or mixtures containing them shall not be used. The means used to build up the test pressure shall have either a pressure limiting device or a pressure reducing device and a gage on the outlet side. The pressure relief device shall be set above the test pressure but low enough to prevent permanent deformation of the system's components.

Exceptions to 9.14.1.1:

1. Mixtures of dry nitrogen, inert gases, ~~and nonflammable Class 1~~ refrigerants² are allowed for factory tests.
2. Mixtures of dry nitrogen, inert gases, or a combination of these with ~~flammable Class 2L, Class 2, or Class 3~~ refrigerants² in concentrations not exceeding the lesser of a refrigerant weight fraction (mass fraction) of 5% or 25% of the LFL are allowed for factory tests.
3. Compressed air without added refrigerant is allowed for factory tests, provided the system is subsequently evacuated to less than 1000 μm (132 Pa) before charging with refrigerant. The required evacuation level is atmospheric pressure for systems using R-718 (water) or R-744 (carbon dioxide) as the refrigerant.

Modify Section 10 as shown. The remainder of Section 10 remains unchanged.

10. DESIGN AND CONSTRUCTION OF EQUIPMENT AND SYSTEMS

[. . .]

10.1.2 Testing Procedure. Tests shall be performed with dry nitrogen or another nonflammable, nonreactive, dried gas. Oxygen, air, or mixtures containing them shall not be used. The means used to build up the test pressure shall have either a pressure limiting device or a pressure reducing device and a gage on the outlet side. The pressure relief device shall be set above the test pressure but low enough to prevent permanent deformation of the system's components.

Exceptions to 10.1.2:

1. Mixtures of dry nitrogen, inert gases, or a combination of such with ~~nonflammable Class 1~~ refrigerants² in concentrations of a refrigerant weight fraction (mass fraction) not exceeding 5% are allowed for tests.

2. Mixtures of dry nitrogen, inert gases, or a combination of such with ~~flammable~~ Class 2L, Class 2, and Class 3 refrigerants^e in concentrations not exceeding the lesser of a refrigerant weight fraction (mass fraction) of 5% or 25% of the LFL are allowed for tests.
3. Compressed air without added refrigerant is allowed for tests, provided the system is subsequently evacuated to less than 1000 μm (132 Pa) before charging with refrigerant. The required evacuation level is atmospheric pressure for systems using R-718 (water) or R-744 (carbon dioxide) as the refrigerant.
4. Systems erected on the premises using Group A1 refrigerant and with copper tubing not exceeding 0.62 in. (16 mm) outside diameter shall be tested by means of the refrigerant charged into the system at the saturated vapor pressure of the refrigerant at 68°F (20°C) minimum.

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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