



**BSR/ASHRAE Addendum j
to ANSI/ASHRAE Standard 15-2024**

Second Public Review Draft

Proposed Addendum j to Standard 15-2024, Safety Standard for Refrigeration Systems

**Second Public Review (June 2025)
(Draft shows Proposed Independent Substantive
Changes to Previous Public Review Draft)**

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(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This proposed addendum removes the exception of Section 7.5.3 which allowed the use of an A3 or B3 refrigerant outdoors with no restriction other than the total charge limitation of Section 7.5.1.1. The proposal also removes the exception of Section 7.8 which allowed without restriction the outdoor use of an A2 refrigerant in high-probability commercial refrigeration systems. These exceptions were added under Addendum l for the 2019 edition of ASHRAE 15 and created an unintended loophole that permitted charge limits of up to 1100 lb (500 kg) if the refrigerating system is installed outdoors. Removal of the exception to Section 7.5.3 does not prohibit the installation of equipment outdoors using A3 or B3 refrigerants. Group A3 and B3 refrigerants may still be used outdoors if they are listed or not listed but approved by the AHJ. At this time, ASHRAE 15 does not address how all equipment must be installed outdoors when utilizing an A2, A3 or B3 refrigerant and there are safety concerns about how refrigerant may leak into spaces surrounding the refrigeration system.

This is the second public review for this addendum which addresses two comments which were received during the first public review. A grammatical change was made to item c. of 7.5.3 and approval by the AHJ was removed from item f. of 7.5.3.

Note: This public review draft of addendum j makes proposed independent substantive changes to the previous public review draft. These substantive changes to the previous public review draft are indicated by **blue-colored text** with **double-underlining** (for additions) and **red-colored text** with **strikethrough** (for deletions), except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard shown in **blue** or **red** text are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.

Addendum j to Standard 15-2024

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

7. RESTRICTIONS ON REFRIGERANT USE

[...]

7.5.3

[...]

3. ~~This restriction does not apply to listed self-contained systems containing~~ c. The refrigeration system is a **listed self-contained system**, **is within listed equipment, contains** no more than 0.331 lb (150 g) of Group A3 refrigerant, **provided that** ~~and~~ the equipment is installed in accordance with the listing and the manufacturer's installation instructions.

[...]

6. ~~This restriction does not apply to refrigeration systems located in machinery rooms or outdoors.~~ f. The refrigeration system installation is **approved by the AHJ and** located in a machinery room in accordance with Sections 8.9 and 8.10.

[...]

Note to Reviewer: The following content shows a clean copy of how modified sections of this standard would appear after incorporating updates from the 2022 to 2024 edition, and the net effect of accepted changes from PPR1 and the associated approved comment responses. This includes items that are not independent substantive changes, and that are not open for review.

7. RESTRICTIONS ON REFRIGERANT USE

[...]

7.5 Additional Restrictions

[...]

7.5.3 Class 3 Refrigerants for refrigeration systems. *Refrigeration systems* containing Group A3 and B3 *refrigerants shall* only be used where at least one of the following is met:

- a. The *refrigeration system* is installed in a laboratory with more than 100 ft² (9.3 m²) of space per person.
- b. The *refrigeration system* is installed in an *industrial occupancy*.
- c. The *refrigeration system* is a *listed self-contained system* containing no more than 0.331 lb (150 g) of Group A3 *refrigerant*, provided that the equipment is installed in accordance with the listing and the *manufacturer's* installation instructions.
- d. The *refrigeration system* is within equipment *listed* to UL 60335-2-89 ⁷/CSA C22.2 No. 60335-2-89 ⁸ and all of the following provisions are met:
 1. The *refrigeration system* contains no more than $0.459 \times LFL$ (lb), where *LFL* is in lb/1000 ft³ ($13 \times LFL$ [kg], where *LFL* is in kg/m³) of Group A3 *refrigerant*.
 2. A *refrigeration system* containing more than $0.141 \times LFL$ (lb) ($4 \times LFL$ [kg]) in any *independent circuit* is installed not less than 20 ft (6 m) from an open flame.
 3. The equipment is installed in accordance with the listing and the *manufacturer's* installation instructions.
- e. The *refrigeration system* is within equipment *listed* to UL 60335-2-40 ⁵/CSA C22.2 No. 60335-2-40 ⁶ and contains no more than $0.106 \times LFL$ (lb) ($3 \times LFL$ [kg]) of Group A3 *refrigerant*, and the equipment is installed in accordance with the listing and the *manufacturer's* installation instructions.
- f. The *refrigeration system* installation is located in a *machinery room* in accordance with Sections 8.9 and 8.10.

[...]

7.8* High-Probability Commercial Refrigeration Systems using Group A2 Refrigerants. *High-probability systems* using Group A2 *refrigerants* for commercial refrigeration applications within the scope of UL 60335-2-89 ⁷/CSA C22.2 No. 60335-2-89 ⁸ *shall* comply with this section. *Refrigeration systems* using Group A2 *refrigerants shall* be limited to *listed self-contained systems* containing no more than $0.459 \times LFL$ (lb), where *LFL* is in lb/1000 ft³ ($13 \times LFL$ [kg], where *LFL* is in kg/m³), provided that the *refrigeration system* is installed in accordance with the listing and the *manufacturer's* installation instructions. *Refrigeration systems* containing more than $0.141 \times LFL$ (lb), ($4 \times LFL$ [kg]) in an *independent circuit shall not* be installed within 20 ft (6 m) of an open flame.

Exceptions to 7.8:

1. This restriction does not apply to laboratories with more than 100 ft² (9.3 m²) of space per person.
2. This restriction does not apply *industrial occupancies*.
3. This restriction does not apply to *refrigeration systems* located in *machinery rooms*.

[...]