ANSI/ASHRAE Addendum l to
ANSI/ASHRAE Standard 34-2007

ASHRAE STANDARD

Designation and Safety Classification of Refrigerants

Approved by the ASHRAE Standards Committee on January 19, 2008; by the ASHRAE Board of Directors on January 23, 2008; and by the American National Standards Institute on February 27, 2008.

This standard is under continuous maintenance 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. The change submittal form, instructions, and deadlines may be obtained in electronic form from the ASHRAE Web site, http://www.ashrae.org, or in paper form from the Manager of Standards. The latest edition of an ASHRAE Standard may be purchased from ASHRAE Customer Service, 1791 Tullie Circle, NE, Atlanta, GA 30329-2305. E-mail: orders@ashrae.org. Fax: 404-321-5478. Telephone: 404-636-8400 (worldwide), or toll free 1-800-527-4723 (for orders in US and Canada).

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SPECIAL NOTE

This American National Standard (ANS) is a national voluntary consensus standard developed under the auspices of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). *Consensus* is defined by the American National Standards Institute (ANSI), of which ASHRAE is a member and which has approved this standard as an ANS, as "substantial agreement reached by directly and materially affected interest categories. This signifies the concurrence of more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that an effort be made toward their resolution." Compliance with this standard is voluntary until and unless a legal jurisdiction makes compliance mandatory through legislation.

ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

ASHRAE Standards are prepared by a Project Committee appointed specifically for the purpose of writing the Standard. The Project Committee Chair and Vice-Chair must be members of ASHRAE; while other committee members may or may not be ASHRAE members, all must be technically qualified in the subject area of the Standard. Every effort is made to balance the concerned interests on all Project Committees.

The Assistant Director of Technology for Standards and Special Projects of ASHRAE should be contacted for:

a. interpretation of the contents of this Standard,
b. participation in the next review of the Standard,
c. offering constructive criticism for improving the Standard, or
d. permission to reprint portions of the Standard.

(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 addendum revises Sections B2.4.1, B2.4.2, and B2.5 to clarify the requirements for fractionation analysis when applying for designation and safety classification of a refrigerant.

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

Addendum l to Standard 34-2007

B2.4.1 Leaks Under Storage/Shipping Conditions. To simulate leaks under storage/shipping conditions, the container shall be filled with the WCF ~~at 23.0°C (73.4°F)~~ to 90%, by mass, of the maximum ~~permissible~~ fill~~, that which precludes~~. The maximum fill is the calculated mass that gives a 100% liquid fill at 54.4°C (130°F)~~, and then~~. The charged blend shall be vapor leaked, 2% by mass of the ~~starting~~ initial charge per hour, at the following temperatures:

(Remainder unchanged.)

B2.4.2 Leaks from Equipment. To simulate leaks from equipment, the container shall be filled with the WCF ~~at ambient temperature~~ to 15% of the maximum ~~permissible~~ fill (as defined in Section B2.4.1) and then shall be vapor leaked at the following temperatures:

(Remainder unchanged.)

B2.5 Leak~~Charge~~/Recharge Testing. Refrigerant blends containing flammable component(s) shall be evaluated to determine the fractionation effects of successive leakage and recharging on the composition of the blend. A container shall be charged to 15% ~~full~~ of ~~its~~the maximum ~~permitted~~fill (as defined in Section B2.4.1) with the WCF formulation of the refrigerant blend. A vapor leak at a rate of 2% by mass of the starting charge per hour shall be created and maintained at ambient temperature until 20% of the starting charge has been leaked. When 20% leak is reached, the composition of the head space gas shall be determined by analysis. The container shall again be charged with the WCF to 15% ~~full~~ of the maximum fill (as defined in Section B2.4.1), leaked, and measured in the above defined manner. The charge/leak cycle shall be performed a total of five times. At the conclusion of the fifth leakage, the composition of the head space gas and liquid shall again be determined by gas chromatography.

(Remainder unchanged.)

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.