

ANSI/ASHRAE Addendum a to  
ANSI/ASHRAE Standard 34-2001



# ASHRAE<sup>®</sup> STANDARD

## Designation and Safety Classifications of Refrigerants

Approved by the ASHRAE Standards Committee June 22, 2002; by the ASHRAE Board of Directors June 26, 2002; and by the American National Standards Institute August 20, 2002.

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 are given at the back of this document and may be obtained in electronic form from ASHRAE's Internet Home Page, <http://www.ashrae.org>, or in paper form from the Manager of Standards. The latest edition of an ASHRAE Standard and printed copies of a public review draft may be purchased from ASHRAE Customer Service, 1791 Tullie Circle, NE, Atlanta, GA 30329-2305. E-mail: [orders@ashrae.org](mailto:orders@ashrae.org). Fax: 404-321-5478. Telephone: 404-636-8400 (worldwide), or toll free 1-800-527-4723 (for orders in U.S. and Canada).

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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 Manager of Standards 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,
- d. permission to reprint portions of the Standard.

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(This foreword is provided for information only and is not part of the addendum.)

## FOREWORD

This addendum underwent a public review as proposed addendum q to ANSI/ASHRAE Standard 34-1997 (also referred to as 34q-97). Resolution of comments raised during the public review delayed its publication until after ANSI/ASHRAE Standard 34-2001 was published.

The purpose of this addendum is to reinstate the previous safety classification for R-C318, which was safety classified in ANSI/ASHRAE Standard 34-1997 as safety group A1. Addendum 34c to ANSI/ASHRAE Standard 34-1997 removed its

safety classification, pending resolution of claims that R-C318 could decompose during prolonged storage to form PFIB. ASHRAE Standing Standard Project Committee 34 could not find adequate evidence for that claim. It reviewed chronic toxicity data that supports a toxicity classification of A.

This addendum also makes an editorial change to Table B1 of the informative Appendix B. The chemical formula for R-C318 is changed for consistency with the IUPAC convention used in Table 1.

### Addendum a

Revise Table 1 as shown to add safety classification to refrigerant number C318:

**TABLE 1**  
**Refrigerant Data and Safety Classifications**

Refrigerant Number	Chemical Name <sup>a,b</sup>	Chemical Formula <sup>a</sup>	Molecular Mass <sup>a</sup>	Normal Boiling Point <sup>a</sup>		Safety Group
				(°C)	(°F)	
C318	octafluorocyclobutane	-(CF <sub>2</sub> ) <sub>4</sub> -	200.0	-6	21	<u>A1</u>

Revise Table B1, Appendix B as shown:

**TABLE 2**  
**Comparison of Safety Group Classifications to Those Under ASHRAE Standard 34-1989**

Refrigerant Number	Chemical Formula	Safety Group	
		1989	2001
C318	C <sub>4</sub> F <sub>8</sub> -(CF <sub>2</sub> ) <sub>4</sub> -	1	A1

## **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.