



# ADDENDA

**ANSI/ASHRAE Addendum ai to  
ANSI/ASHRAE Standard 34-2013**

# Designation and Safety Classification of Refrigerants

Approved by the ASHRAE Standards Committee on June 25, 2016; by the ASHRAE Technology Council on June 29, 2016; and by the American National Standards Institute on June 3, 2016.

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**Cognizant TC: 3.1, Refrigerants and Secondary Coolants**  
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## FOREWORD

*This addendum adds the zeotropic refrigerant blend R-452C to Table 4-2 and Table D-2.*

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

### Addendum ai to Standard 34-2013

*Add the following underlined data to Table 4-2 and Table D-2 in the columns indicated.*

#### TABLE 4-2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 452C

Composition (Mass %) = R-32/125/1234yf (12.5/61.0/26.5)

Composition Tolerances = +0.5, -1.5/±1.0/+0.5, -1.5

OEL = 800

Safety Group = A1

RCL = 100,000 ppm v/v; 27 lb/Mcf; 430 g/m<sup>3</sup>

Highly Toxic or Toxic Under Code Classification = Neither

#### TABLE D-2 Data for Refrigerant Blends

Refrigerant Number = 452C

Composition (Mass %) = R-32/125/1234yf (12.5/61.0/26.5)

Average Molecular Mass = 101.9 g/mol

Bubble Point (°F) = -53.5

Dew Point (°F) = -47.6

Bubble Point (°C) = -47.5

Dew Point (°C) = -44.2



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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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