



# ADDENDA

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

# Designation and Safety Classification of Refrigerants

Approved by the ASHRAE Standards Committee on October 13, 2015; by the ASHRAE Technology Council on October 19, 2015; and by the American National Standards Institute on November 2, 2015.

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

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## FOREWORD

*This addendum adds the zeotropic refrigerant blend R-454A to Table 4-2 and Table D-2. The recommended flammability classification 2L is based on an LFL of 6.3 vol. %; a heat of combustion of 10,040 kJ/kg (4316 Btu/lb); and a burning velocity of 2.4 cm/s. The recommended toxicity classification A is based on an adopted OEL of 690 ppm v/v. The recommended ATEL is 140,000 ppm v/v.*

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

### Addendum s 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 = 454A  
Composition (Mass %) = R-32/1234yf (35.0/65.0)  
Composition Tolerances = +2.0/-2.0, +2.0/-2.0  
OEL = 690  
Safety Group = A2L  
RCL = 16,000 ppm v/v; 28 lb/Mcf; 450 g/m<sup>3</sup>  
Highly Toxic or Toxic Under Code Classification = Neither

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

Refrigerant Number = 454A  
Composition (Mass %) = R-32/1234yf (35.0/65.0)  
Average Molecular Mass = 80.5  
Bubble Point (°F) = -55.1  
Dew Point (°F) = -42.9  
Bubble Point (°C) = -48.4  
Dew Point (°C) = -41.6



## **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.

### **About ASHRAE**

ASHRAE, founded in 1894, is a global society advancing human well-being through sustainable technology for the built environment. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration, and sustainability. Through research, Standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow's built environment today.

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