



ADDENDA

**ANSI/ASHRAE Addendum ad to
ANSI/ASHRAE Standard 34-2019**

Designation and Safety Classification of Refrigerants

Approved by ASHRAE and the American National Standards Institute on July 29, 2022.

This addendum was approved 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. Instructions for how to submit a change can be found on the ASHRAE® website (<https://www.ashrae.org/continuous-maintenance>).

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Cognizant TC: 3.1, Refrigerants and Secondary Coolants

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FOREWORD

Addendum ad adds single-compound refrigerant R-1132(E) to Tables 4-1, D-1, and E-1.

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

Addendum ad to Standard 34-2019

Modify Tables 4-1, D-1, and E-1 as shown.

Table 4-1 Refrigerant Data and Safety Classifications

Refrigerant Number = R-1132(E)

Chemical Name = trans-1,2-difluoroethene

Chemical Formula = HFO-1132(E)

OEL = 350 ppm v/v

Safety Group = B2

RCL = 11,000 ppm v/v; 1.8 lb/Mcf; 28 g/m³

LFL = 43,000 ppm v/v; 7.0 lb/Mcf; 113 g/m³

Highly Toxic or Toxic Under Code Classification = Neither

Table D-1 Refrigerant Data

Refrigerant Number = R-1132(E)

Chemical Name = trans-1,2-difluoroethene

Chemical Formula = HFO-1132(E)

Relative Molar Mass = 64.0 g/mol

Normal Boiling Point (°F) = -62.5

Normal Boiling Point (°C) = -52.5

Table E-1 Toxicity Table for Standard 34

Refrigerant Number = R-1132(E)

Chemical Name = trans-1,2-difluoroethene

LC₅₀ = 106,000 ppm

Cardiac Sensitization LOEL = ND

Cardiac Sensitization NOEL = 116,000 ppm

Anesthesia EC₅₀ = ND

Anesthesia LOEL = ND

Anesthesia NOEL = 106,250 ppm

Other = ND

ATEL = 30,000 ppm

ODL = 140,000 ppm

FCL = 11,000 ppm

RCL = 11,000 ppm

LFL = 43,000 ppm

ATEL Source = Mortality

RCL Source = FCL

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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.

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