



**BSR/ASHRAE Addendum s  
to ANSI/ASHRAE Standard 34-2019**

**Public Review Draft**

# **Proposed Addendum s to Standard 34-2019, Designation and Safety Classification of Refrigerants**

**First Public Review (March 2021)  
(Draft shows Proposed Changes to Current Standard)**

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**(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 adds the zeotropic refrigerant blend R-448B to Tables 4-2 and D-2.*

**Note:** This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strike through~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.

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### Addendum s to Standard 34-2019

***Modify Tables 4-2 and D-2 as shown.***

#### **Table 4-2 Data and Safety Classifications for Refrigerant Blends**

Refrigerant Number = 448B

Composition (Mass %) = R-32/125/1234yf/134a/1234ze(E) (21.0/21.0/20.0/31.0/7.0)

Composition tolerances = +0.5,-2.0/+2.0,-0.5/+0.5,-2.0/+2.0,-1.0/+0.5,-2.0

OEL = 850 ppm v/v

Safety Group = A1

RCL = 97,000 ppm v/v; 22.0 lb/Mcf; 350 g/m<sup>3</sup>

Highly Toxic or Toxic Under Code Classification = Neither

#### **Table D-2 Data Classifications for Refrigerant Blends**

Refrigerant Number = 448B

Composition (Mass %) = R-32/125/1234yf/134a/1234ze(E) (21.0/21.0/20.0/31.0/7.0)

Average Relative Molar Mass = 89.3 g/mol

Bubble Point (°F) = -47.3

Dew Point (°F) = -35.1

Bubble Point (°C) = -44.1

Dew Point (°C) = -37.4