

**ERRATA SHEET FOR ANSI/ASHRAE STANDARD 34-2022
Designation and Safety Classification of Refrigerants**

July 5, 2024

The corrections listed in this errata sheet apply to ANSI/ASHRAE Standard 34-2022. The first printing is identified on the outside back cover as “Product code: 86306 9/22”. Shaded items have been added since the previous published errata sheet date May 10, 2024 was distributed.

Page Erratum

8 **4.1.14** Revise Section 4.1.14 as shown below. Change is highlighted in yellow.
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

4.1.14 In the case where stereoisomers can exist, the opposed (Entgegen or trans) isomer will be identified by the suffix (E), and the same side (~~Zusamen~~ Zusammen or cis) isomer will be identified by the suffix (Z).

18 **Table 4-2.** Revise LFL (g/m³) value for refrigerant number 429A from “83.8” to “52.1”.

Table 4-2. Revise LFL (g/m³) value for refrigerant number 430A from “44.0” to “84.0”.

Table 4-2. Revise LFL (g/m³) value for refrigerant number 431A from “38.6” to “44.0”.

19 **Table 4-2.** Revise LFL (g/m³) value for refrigerant number 433A from “32.4” to “35.7”.

Table 4-2. Revise LFL (g/m³) value for refrigerant number 433C from “83.8” to “32.2”.

24 **Table 4-2** Revise **Table 4-2** as shown below. Change is highlighted in yellow.
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

Refrigerant	RCL ^a			LFL ^j			BV ^p
	ppm v/v	lb/1000 ft ³	g/m ³	ppm v/v	lb/1000 ft ³	g/m ³	(cm/s)
[...]				[...]			
465A	12,000	2.5	40	98,000 <u>48,000</u>	10.0	160.9	
[...]							
467A	31,000	6.7 <u>5.7</u>	110 <u>92</u>	125,000 ^m	22.9 ^m	367 ^m	<4
468A	18,000	4.1 <u>4.2</u>	66 <u>68</u>	73,000	16.9	270	2.1
468B	18,000	4.4 <u>4.3</u>	70	72,000	17.3	278	7.3 ^q

Page Erratum

37 9.5.2.1 Individual Compounds. Revise Section 9.5.2.1e as shown below. Change is highlighted in yellow.

(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

9.5.2.1 Individual Compounds. The following information shall be provided for single-compound refrigerants or for each component of blends:

[...]

e. Normal boiling-point temperature at 14.7 psia (101.3 kPa~~101 kPa~~)

[...]

38 9.5.2.2 Azeotropic Blends. Revise Sections 9.5.2.2e and 9.5.2.2f as shown below. Changes are highlighted in yellow.

(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

9.5.2.2 Azeotropic Blends. ...

The following additional information shall be provided for azeotropes:

[...]

e. Normal boiling-point temperature (bubble-point temperature) at 14.7 psia (101.3 kPa~~101 kPa~~) as formulated

f. Normal dew-point temperature at 14.7 psia (101.3 kPa~~101 kPa~~) as formulated.

[...]

38 9.5.2.3 Zeotropic Blends. Revise Sections 9.5.2.3d and 9.5.2.3e as shown below. Changes are highlighted in yellow.

(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

9.5.2.3 Zeotropic Blends. The following additional information shall be provided for zeotropes (including near azeotropes):

[...]

d. Bubble-point temperature at 14.7 psia (101.3 kPa~~101 kPa~~)

e. Dew-point temperature at 14.7 psia (101.3 kPa~~101 kPa~~)

[...]

Page Erratum

46 B2.1.1 Experimental Verification. Revise Sections B2.1.1 as shown below. Changes are highlighted in yellow.

(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

B2.1.1 Experimental Verification. Experimental verification of the model shall take the form of leakage experiments (carried out in accordance with Section B2.4B2.3) that result in the WCFF. ...

[...]

51 Table D-2, Data for Refrigerant Blends. Revise the Relative Molar Mass values for rows 123, 152a, 170, 290 as shown below. Changes are highlighted in yellow.

(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

Table D-2 Data for Refrigerant Blends

Refrigerant Number	Chemical Name ^a	Relative Molar Mass
[...]		
123	2,2-dichloro-1,1,1-trifluoroethane	<u>152.9</u> 153.0
[...]		
152a	1,1-difluoroethane	<u>66.1</u> 66.0
170	ethane	<u>30.1</u> 30.0
[...]		
290	propane	<u>44.1</u> 44.0
[...]		

54 Table D-2. Change Average Relative Molar Mass for refrigerant number 402A from “101.6” to “101.5”.

55 Table D-2. Change Composition (mass %) for refrigerant number 421A from “R-125/134a (58.0/45.0)” to “R-125/134a (58.0/42.0)”.

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- 58 **Table D-2.** Change Average Relative Molar Mass for refrigerant number 457C from “95.4” to “95.5”.
- 59 **Table D-2.** Change Azeotropic Relative Molar Mass for refrigerant number 502 from “112.0” to “111.6”.
- 60 **Table D-2, Data for Refrigerant Blends.** Revise the Normal Bubble Point (°F) value for row 510A as shown below. Changes are highlighted in yellow.
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

Table D-2 Data for Refrigerant Blends

Refrigerant Number	Composition (mass %) ^a	Normal Bubble Point	
		°C	°F
[...]			
510A	R-E170/600a (88.0/12.0)	-25.2	<u>-13.4</u> 4 -13.4
[...]			

- 60 **Table D-2.** Change Azeotropic Relative Molar Mass for refrigerant number 515B from “117.9” to “117.5”.