BSR/ASHRAE Addendum h
to ANSI/ASHRAE Standard 15-2022

First Public Review Draft

Proposed Addendum h to
Standard 15-2022, Safety Standard
for Refrigeration Systems

First Public Review (August 2023)
(Draft shows Proposed Changes to Current Standard)

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ASHRAE, 180 Technology Parkway NW, Peachtree Corners, GA 30092
FOREWORD

This proposed addendum corrects values of conversion factors in Table 7-3 for use in the calculation of effective dispersal volume charge (EDVC) and adds equations to calculate conversion factors for other refrigerants not included in Table 7-3.

Note: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and strikethrough (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.

Addendum h to Standard 15-2022

Modify Section 7 as follows. The remainder of Section 7 remains unchanged.

7. DEFINITIONS

[ ... ]

7.6.1.2* Other Refrigeration Systems. For any refrigeration system not meeting the requirements of Section 7.6.1.1, the refrigerant charge of the largest independent circuit of the system \((m_s)\) shall not exceed the value from Equation 7-9a:

\[
EDVC = M_{def} \times F_{LFL} \times F_{occ}
\]

(7-9a)

where:

- \(EDVC\) = effective dispersal volume charge, \(\text{ft}^3 (\text{m}^3)\)
- \(M_{def}\) = refrigerant charge from Table 7-1 (lb) or Table 7-2 (kg)
- \(F_{LFL}\) = LFL conversion factor from Table 7-3, or for refrigerant designations not in Table 7-3, use Equation 7-9b
- \(F_{occ}\) = occupancy adjustment factor; (For all occupancies other than institutional occupancies, \(F_{occ}\) has a value of 1. For institutional occupancies, \(F_{occ}\) has a value of 0.5.)

\[
F_{LFL} = \left( \frac{LFL}{LFL_{R-32}} \right)^{1.25}
\]

(7-9b)

where:

- \(LFL\) = lower flammability limit, \(\text{lb}/1000 \text{ ft}^3 (\text{g/m}^3)\)
- \(LFL_{R-32}\) = lower flammability limit of R-32, \(\text{lb}/1000 \text{ ft}^3 (\text{g/m}^3)\)

[ ... ]
Table 7-3  \textit{LFL} Conversion Factor

<table>
<thead>
<tr>
<th>Refrigerant</th>
<th>(F_{LFL})</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-32</td>
<td>1.00</td>
</tr>
<tr>
<td>R-452B</td>
<td>1.02</td>
</tr>
<tr>
<td>R-454A</td>
<td>0.900, 0.92</td>
</tr>
<tr>
<td>R-454B</td>
<td>0.960, 0.97</td>
</tr>
<tr>
<td>R-454C</td>
<td>0.940, 0.95</td>
</tr>
<tr>
<td>R-457A</td>
<td>0.650, 0.71</td>
</tr>
</tbody>
</table>

[...]