BSR/ASHRAE Addendum ad to ANSI/ASHRAE Standard 34-2022

Public Review Draft

Proposed Addendum ad to Standard 34-2022, Designation and Safety Classification of Refrigerants

First Public Review (April 2024)
(Draft shows Proposed Changes to Current Standard)

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180 Technology Parkway NW, Peachtree Corners, GA 30092
FOREWORD

This proposed addendum revises Table E-1 to use lethality (acute toxicity) value (50 % of lethality ATEL) as the basis for the R-1270 anesthetic value.

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.

Modify Table E-1 as shown. The remainder of Table E-1 remains unchanged.
INFORMATIVE APPENDIX E—TOXICITY AND FLAMMABILITY DATA FOR SINGLE-COMPOUND REFRIGERANTS

Table E-1  Toxicity Table for Standard 34—ATEL, ODL, FCL, and RCL Values for Single-Compound Refrigerants\(^a\) (ppm v/v)

<table>
<thead>
<tr>
<th>Refrigerant ( R^b )</th>
<th>Chemical Name</th>
<th>Cardiac Sensitization</th>
<th>Anesthesia</th>
<th>Other(^h)</th>
<th>ATEL</th>
<th>ODL</th>
<th>FCL</th>
<th>RCL</th>
<th>LFL</th>
<th>ATEL Source</th>
<th>RCL Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>( LC_{50}^{b,c} )</td>
<td>( LOEL^d )</td>
<td>( NOEL^d )</td>
<td>( EC_{50}^e )</td>
<td>( LOEL^f )</td>
<td>( NOEL^g )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1270 propene (propylene)</td>
<td>&gt;490,000(^a)</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
<td>( ND )</td>
<td>10,000</td>
<td>69,000</td>
<td>ND</td>
<td>1000</td>
<td>140,000</td>
<td>6700</td>
</tr>
</tbody>
</table>

ND: None determined or not adequately defined according to criteria of this standard.
NA: Not applicable.

Note: The data shown in this table are rounded to three significant digits to avoid suggestion of artificial precision, but actual calculations used the data as published or converted to avoid propagation of errors in calculations, especially for blends. The ATEL and RCL concentrations are rounded to two significant figures.