North Carolina Department of Environment and Natural Resources
Division of Air Quality

CHEMICAL: Phosphine (#59)

TLV - TWA: 0.3 ppm (0.4 mg/m³)
TVL - STEL: 1.0 ppm (1.0 mg/m³)

<table>
<thead>
<tr>
<th>Symptoms/Conditions</th>
<th>Level</th>
<th>Acute/Chronic</th>
<th>Reference</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory animals death</td>
<td>10 ppm</td>
<td>Acute</td>
<td>D:R1P482</td>
<td>7 courses of 4h/day for 2 months</td>
</tr>
<tr>
<td>Worker death - case report</td>
<td>8 ppm</td>
<td>Acute</td>
<td>D:R3P482</td>
<td>2 h/day exposure length of period not mentioned</td>
</tr>
<tr>
<td>Diarrhea, nausea, vomiting, cough,</td>
<td>&lt;10 ppm</td>
<td>Acute</td>
<td>D:R4,5P482</td>
<td>Intermittent exposure of workers</td>
</tr>
<tr>
<td>tightness of chest, dizziness</td>
<td>(range up to 35)</td>
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<td></td>
</tr>
</tbody>
</table>

Note: No effects reported within 10 fold range of TLV-TWA

Recommend considering symptoms (diarrhea, nausea, vomiting, etc. reported at concentrations less than 10 ppm. Severity = 1

Conclusions
Acute systemic toxicant
Starting point 1.0
Adjustment factor 10
Recommended AAL 0.1 ppm (15 min.)

Comments
No severe effect within range of TLV

AAL: 0.1 ppm (0.13 mg/m³), 15-minute averaging time, 1987

The Environmental Management Commission (EMC) changed the 15-min averaging time to 1-hr averaging time in 1997.

D: Documentation of Threshold Limit Values, 1986 (R: reference, P: page)
R: Registry of Toxic Effects of Chemical Substances