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

**HEMICAL:**  
Hydrogen Chloride (#75)

**TLV - TWA:**  
5 ppm (7 mg/m³) ceiling limit

**TVL - STEL:**

<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>Irritation of the throat</td>
<td>35 ppm</td>
<td>Acute</td>
<td>D:R2P313</td>
<td>Short exposure</td>
</tr>
<tr>
<td></td>
<td>10 ppm</td>
<td></td>
<td></td>
<td>Prolonged exposure</td>
</tr>
<tr>
<td>Irritating</td>
<td>5 ppm</td>
<td></td>
<td>D:R3,4P313</td>
<td>Soviet workers</td>
</tr>
<tr>
<td>Gastritis</td>
<td></td>
<td>?</td>
<td>D:R5P313</td>
<td>No specification of level</td>
</tr>
<tr>
<td>Chronic bronchitis</td>
<td></td>
<td>?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Conclusions**

Acute irritant  
Starting point 5 ppm for acute exposure only  
Adjustment factor 10  
Recommended AAL 0.5 ppm (15 min)

**Comments**

Evidence for chronic bronchitis and gastritis is based on a report (D:R5P313) quoting a study by Soviet workers, without details of intensity or duration of exposure or numbers of persons affected. This was judged to be an inadequate basis for categorizing this compound as a chronic toxicant.

AAL: 0.5 ppm (0.7 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