## Hydrogen Bromide (HBr)

<table>
<thead>
<tr>
<th>Grade</th>
<th>ULSI 5N</th>
<th>Gigabit 5N5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity, %</td>
<td>99.999</td>
<td>99.9995</td>
</tr>
<tr>
<td>Al</td>
<td>≤5</td>
<td>Mg</td>
</tr>
<tr>
<td>Ca</td>
<td>≤5</td>
<td>Na</td>
</tr>
<tr>
<td>Cr</td>
<td>≤5</td>
<td>Ni</td>
</tr>
<tr>
<td>Cu</td>
<td>≤1</td>
<td>Pb</td>
</tr>
<tr>
<td>Fe</td>
<td>≤10</td>
<td>Zn</td>
</tr>
<tr>
<td>Mn</td>
<td>≤1</td>
<td>Co</td>
</tr>
<tr>
<td>HBr*</td>
<td>≤50 ppmv</td>
<td></td>
</tr>
<tr>
<td>Hydrogen*</td>
<td>≤50 ppmv</td>
<td></td>
</tr>
</tbody>
</table>

### Grade ULSI 5N

- **Internal Volume**: Liters 43.8
- **Content**
  - kg: 54.55
  - lbs: 130
- **Change Point**
  - lbs: 11.0

### Cylinders

- **DOT Shipping Name**: Hydrogen Bromide, Anhydrous
- **DOT Classification**: 2.3 Poison Gas Hazard Zone C (Gas Poisonous by Inhalation)
- **DOT Label**: POISON GAS INHALATION HAZARD CORROSIVE GAS

### Shipping Information

- **UN Number**: UN 1048
- **ECCN #**: EAR99
- **Harmonized #**: 2811.19.0000
- **Shipped as**: Liquefied Gas

### Technical Data

- **Cylinder Pressure @NTP**: 320 psig, 23.5 atm
- **Specific Volume @NTP**: 0.3 m³/kg, 4.8 ft³/lb
- **CAS No**: 10035-10-6
- **CGA/DISS/JIS**: 330/634/W22-14L
- **Molecular Weight**: 80.91
- **TLV**: 3 ppm
- **Vapour Pressure**: Temp, °C 0.0, 15.5, 21.0, 32.2, 43.3
  - Press, psig: 173, 269, 320, 405, 517
  - Temp, °F: 32, 60, 70, 90, 110
- **RFO Data**
  - **Size, mm**: 0.254, 0.3556, 0.508, 0.762, 1.016
  - **Size, inches**: 0.010, 0.014, 0.020, 0.030, 0.040
  - **Flow, sccm**: 7950, 15177, 31317, 69862, 120451
  - **Flow, scf/h**: 17, 32, 66, 148, 255

NTP = 21°C or 70°F and 101.3 kPa or 1 atm

### Nominal Diameter (OD)xHeight

<table>
<thead>
<tr>
<th>Cylinder</th>
<th>Treatment</th>
<th>Nominal Diameter (OD)xHeight*</th>
<th>Material of Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>QN</td>
<td>ULTRA-LINE®</td>
<td>23x130/134/143 x 951/52.5/56</td>
<td>CS/NI-lined</td>
</tr>
</tbody>
</table>

*Height is reported as the distance from the bottom of the cylinder to the cylinder neck/center of the valve outlet/top of the handwheel

**WARNING**: This product can expose you to chemicals including Carbon Monoxide, which is known to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

http://www.matheson gases.com