## Boron Trichloride

<table>
<thead>
<tr>
<th>Grade</th>
<th>Semicon 4N5</th>
<th>ULSI 5N</th>
<th>Gigabit 5N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity, %</td>
<td>99.995</td>
<td>99.999</td>
<td>99.9995</td>
</tr>
<tr>
<td>Metals, ppbw</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al</td>
<td>≤20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ni</td>
<td>≤10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen</td>
<td>≤9 ppmv</td>
<td>≤1.0 ppmv</td>
<td>≤0.5 ppmv</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>≤30 ppmv</td>
<td>≤4.0 ppmv</td>
<td>≤0.5 ppmv</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>≤5 ppmv</td>
<td>≤2.0 ppmv</td>
<td>≤0.5 ppmv</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>≤3 ppmv</td>
<td>≤0.5 ppmv</td>
<td>≤0.3 ppmv</td>
</tr>
<tr>
<td>Methane</td>
<td>≤1 ppmv</td>
<td>≤0.5 ppmv</td>
<td>≤0.5 ppmv</td>
</tr>
<tr>
<td>Chlorine</td>
<td>≤0.1 ppmv</td>
<td>≤0.1 ppmv</td>
<td>≤0.1 ppmv</td>
</tr>
<tr>
<td>Phosgene</td>
<td>≤0.1 ppmv</td>
<td>≤0.1 ppmv</td>
<td>≤0.1 ppmv</td>
</tr>
<tr>
<td>Hydrogen Chloride</td>
<td>≤1.0 ppmv</td>
<td>≤1.0 ppmv</td>
<td>≤1.0 ppmv</td>
</tr>
<tr>
<td>Silicon Tetrachloride</td>
<td>≤2.0 ppmv</td>
<td>≤2.0 ppmv</td>
<td>≤2.0 ppmv</td>
</tr>
</tbody>
</table>

### TECHNICAL DATA

**Internal Volume**

<table>
<thead>
<tr>
<th>Cylinder Sizes &gt;&gt;</th>
<th>XP</th>
<th>QF</th>
<th>GF</th>
<th>JF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liters</td>
<td>454</td>
<td>43.8</td>
<td>17.1</td>
<td>2.3</td>
</tr>
<tr>
<td>kg Content</td>
<td>500</td>
<td>50</td>
<td>18.2</td>
<td>2.3</td>
</tr>
<tr>
<td>lbs Content</td>
<td>1100</td>
<td>110</td>
<td>40</td>
<td>5</td>
</tr>
<tr>
<td>lbs Change Point*</td>
<td>6.6</td>
<td>0.66</td>
<td>0.25</td>
<td>0.03</td>
</tr>
</tbody>
</table>

* A lot analysis is provided for each order.
* Pneumatic valves, JIS connections available upon request.

**DOT Shipping Name**

- Boron Trichloride

**DOT Classification**

- 2.3 Poison Gas, Hazard Zone C

**DOT Label**

- POISON GAS / INHALATION HAZARD, CORROSIVE GAS

**UN Number**

- UN 1741

**ECCN #**

- EAR99

**Hazmat UN Number**

- UN 1741

**Chemical Name**

- Boron Trichloride

**DOT Class**

- 2.3 Poison Gas

**Equipment**

- 2.3 Poison Gas, Hazard Zone C

**DOT Harmonized Number**

- 2812.10.5050

**DOT Shipping Description**

- Liquefied Gas

**Shipping Name**

- Boron Trichloride

**Warning**

- This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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**Cylinder Pressure**

- @NTP: 4.4 psig (1.34 atm)

**Specific Volume**

- 0.21 m³/kg

**Molecular Weight**

- 117.17 g/mol

**TLV**

- 1 ppm

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**Cryptosis**

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- Pneumatic valves, JIS connections available upon request.

**Cylinder Treatment**

- XP: ULTRA-LINE®
- QF: ULTRA-LINE®
- JF: ULTRA-LINE®

**Nominal Diameter (OD)xHeight***

<table>
<thead>
<tr>
<th>Cylinder</th>
<th>Treatment</th>
<th>cm</th>
<th>Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>XP</td>
<td>ULTRA-LINE®</td>
<td>74x130/149/167</td>
<td>29.5x52/59.5/67</td>
</tr>
<tr>
<td>QF</td>
<td>ULTRA-LINE®</td>
<td>23x130/134/143</td>
<td>9x51/62.5/56</td>
</tr>
<tr>
<td>JF</td>
<td>ULTRA-LINE®</td>
<td>10x33/37/46</td>
<td>4x13/14.5/18</td>
</tr>
</tbody>
</table>

**Material of Construction**

- Cylinder: CS
- Valve: SS

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**Matheson**

- www.mathesongas.com

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**DOT Classification**

- 2.3 Poison Gas, Hazard Zone C

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**Chemical Name**

- Boron Trichloride

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**Shipping Name**

- Boron Trichloride

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