Boron Nitride Powders
NX Grades

Momtive Performance Materials produces over 70 standard and custom grades of boron nitride (BN) powders to meet a wide range of application requirements and has over 50 years of expertise in the synthesis and refinement of BN powders.

Potential Applications
Momentive’s NX grades are excellent candidates to consider for use in a wide range of demanding applications, including:

- Lubricants and release agents for high-temperature metal and glass processing
- Refractory coatings
- Base material for hot pressed solids and metal-matrix or ceramic-metal composites
- Processing and final product enhancement of plastics, including nucleation of solid and foamed products
- Lubricating and reinforcing additives for tribological enhancement of polymer composites

Key Features & Typical Benefits

- Thermal Conductor
- Electrical Insulator
- Low Dielectric Constant/Loss
- High Temperature Stability
- Lubricious
- Inert and Chemically Stable
- Non-Wetting

<table>
<thead>
<tr>
<th>Typical Physical Properties</th>
<th>NX1</th>
<th>NX5</th>
<th>NX9</th>
<th>NX10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystal (Type)</td>
<td>Hexagonal (Graphitic)</td>
<td>Hexagonal (Graphitic)</td>
<td>Hexagonal (Graphitic)</td>
<td>Hexagonal (Graphitic)</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td>Mean Particle Size µm</td>
<td>0.9</td>
<td>5.0</td>
<td>9.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Crystal Size µm</td>
<td>0.2-0.5</td>
<td>0.2-0.5</td>
<td>0.2-0.5</td>
<td>0.2-0.5</td>
</tr>
<tr>
<td>Surface Area m²/g</td>
<td>20</td>
<td>14</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Tap Density g/cm³</td>
<td>0.12</td>
<td>0.25</td>
<td>0.50</td>
<td>0.40</td>
</tr>
<tr>
<td>Oxygen %</td>
<td>0.9-1.2</td>
<td>1.0-1.5</td>
<td>11.0-13.0</td>
<td>0.9-1.2</td>
</tr>
<tr>
<td>Soluble Borates %</td>
<td>0.10</td>
<td>0.10</td>
<td>4.0-7.0</td>
<td>0.10</td>
</tr>
<tr>
<td>Carbon %</td>
<td>0.03</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>Calcium %</td>
<td>&lt; 0.01</td>
<td>&lt; 0.01</td>
<td>3.0-4.0</td>
<td>&lt; 0.01</td>
</tr>
</tbody>
</table>

Boron Nitride Powder Grades NX1, NX5, NX9, NX10

NX1
NX1 is an ultrafine grade with a submicron mean particle size, making it easy to disperse. It also has the highest surface area of the NX grades.

NX5
NX5 has a mean particle size of approximately 5 microns. It contains slightly higher oxygen levels than typical BN grades.

NX9
NX9 has a mean particle size of approximately 9 microns and the lowest surface area of the NX grades. It has a higher level of residual calcium and soluble borates than most BN grades.

NX10
NX10 has a mean particle size of approximately 10 microns and is a higher purity grade than NX9.

Typical Trace Element Content

| Si  | < 500 ppm |
| Cu, Al, Mg, Fe, K | < 100 ppm (per element) |
| Cl, S | < 50 ppm (per element) |
| Na  | < 20 ppm  |
| Other Metals | < 10 ppm each |

Note: Test data. Actual results may vary.
Typical properties are average data and are not to be used as or to develop specifications.
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For email inquiries, we will make every attempt to respond in the incoming written language. If that is not possible, we will respond in English.

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