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

**Applications**

Momentive Performance Materials’ boron nitride (BN) powder grades HCR48, HCJ48, HCM and AC6091 are large, high-density agglomerates, of ~10 μm crystals, with average particle sizes between 175-275 μm and tap densities of ~1g/cm³. These features, combined with low average surface areas, give powders that typically flow readily, withstand harsh processing, and have outstanding thermal characteristics.

These grades are excellent candidates to consider for use in thermal spray applications as well as metal-matrix and ceramic composites for wear applications such as high-performance brake linings. They may also be considered for use in heating elements and adhesives, pastes, and potting compounds with increased thermal conductivity and high electrical resistivity.

**Key Features & Typical Benefits**

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

**Typical Physical Properties**

<table>
<thead>
<tr>
<th>HCR48</th>
<th>HCJ48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystal (Type)</td>
<td>Hexagonal (Graphitic)</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Mean Particle Size μm</td>
<td>250</td>
</tr>
<tr>
<td>Crystal Size μm</td>
<td>10</td>
</tr>
<tr>
<td>Surface Area m²/g</td>
<td>2.6</td>
</tr>
<tr>
<td>Tap Density g/cm³</td>
<td>1.1</td>
</tr>
<tr>
<td>Oxygen %</td>
<td>2.5</td>
</tr>
<tr>
<td>Soluble Borates %</td>
<td>3</td>
</tr>
<tr>
<td>Carbon %</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**HCR48**

HCR48 has an average particle size of 250 μm and is the highest density (hardest) grade offered by Momentive Performance Materials. It has higher oxygen and soluble borate levels than most grades, which limits its performance in high-temperature (>550° C) applications.

**HCJ48**

HCJ48 has an average particle size of 275 μm and offers higher purity than HCR48 with a slightly lower density.

**Typical Trace Element Content**

<table>
<thead>
<tr>
<th>(ppm, per element)</th>
<th>HCR48</th>
<th>HCJ48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ca, Si</td>
<td>&lt;500</td>
<td></td>
</tr>
<tr>
<td>Cu, Al, Mg, Fe, K</td>
<td>&lt;100</td>
<td></td>
</tr>
<tr>
<td>Cl, S</td>
<td>&lt;50</td>
<td></td>
</tr>
<tr>
<td>Na</td>
<td>&lt;20</td>
<td></td>
</tr>
<tr>
<td>Other Metals</td>
<td>&lt;10</td>
<td></td>
</tr>
</tbody>
</table>

1 Typical data are average and actual results may vary.
2 Typical data shall not be used as product specifications.
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LIMITATIONS: Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

EMERGENCY SERVICE:

Momentive Performance Materials maintains an around-the-clock emergency service for its products.

**LOCATION** | **EMERGENCY SERVICE PROVIDER** | **EMERGENCY CONTACT NUMBER**
---|---|---
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Alaska, Hawaii | CHEMTREC | 1.800.424.9300
Canada, | CHEMTREC | 1.800.424.9300
Europe, Israel | CHEMTREC | 1.800.424.9300
Middle East | CHEMTREC | 1.800.424.9300
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China | CHEMTREC | +44(0) 1235239671
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