BORON CARBIDE  GRADE HP, GRADE HS

Chemical Formula  \( B_4C \)
Chemical Name  Boron Carbide
HS Number  28499010
Grades Available
Product Designation
\( B_4C \) Grade HP
\( B_4C \) Grade HS

Chemical Characteristics
(Mass fraction in % [cg/g]; ppm [µg/g])

<table>
<thead>
<tr>
<th></th>
<th>Grade HP</th>
<th>Grade HS</th>
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</thead>
<tbody>
<tr>
<td>B:C Ratio</td>
<td>3.8 - 3.9</td>
<td>3.7 - 3.8</td>
</tr>
<tr>
<td>C min.</td>
<td>21.8 %</td>
<td>21.8 %</td>
</tr>
<tr>
<td>N max.</td>
<td>0.7 %</td>
<td>0.7 %</td>
</tr>
<tr>
<td>O max.</td>
<td>1.0 %</td>
<td>1.7 %</td>
</tr>
<tr>
<td>Fe max.</td>
<td>0.05 %</td>
<td>0.05 %</td>
</tr>
<tr>
<td>Si max.</td>
<td>0.15 %</td>
<td>0.15 %</td>
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<tr>
<td>Al max.</td>
<td>0.05 %</td>
<td>0.05 %</td>
</tr>
<tr>
<td>Other (^1) max.</td>
<td>0.5 %</td>
<td>0.5 %</td>
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</tbody>
</table>

Physical Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Grade HP</th>
<th>Grade HS</th>
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<tbody>
<tr>
<td>Specific Surface Area (^2)</td>
<td>6.0 - 9.0 m²/g</td>
<td>15.0 - 20.0 m²/g</td>
</tr>
<tr>
<td>Green Density (^3)</td>
<td>1.5 - 1.7 g/cm³</td>
<td>1.6 - 1.8 g/cm³</td>
</tr>
<tr>
<td>Particle Size Distribution (^4)</td>
<td>D 90 %</td>
<td>4.5 - 7.5 µm</td>
</tr>
<tr>
<td></td>
<td>D 50 %</td>
<td>1.5 - 3.5 µm</td>
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<tr>
<td></td>
<td>D 10 %</td>
<td>0.3 - 0.6 µm</td>
</tr>
</tbody>
</table>

1) Sum total Ca, Cr, Mg, Mn, Ni, Ti, W. 2) TriStar 3-point by BET per ASTM D 3663. 3) 10³ kg/cm². 4) MASTERSIZER by Laser Light Diffraction per ASTM B 822, deglomeration with high energy ultrasonic before analysis.
5) Secondary Electron Image (SEI)

SEM Photomicrograph
scale see photograph,
B4C Grade HS

Packaging
25 kg steel drums with polyethylene inlet (60 Liter) 8 drums
on one pallet CP1 (1000x1200 mm) = 1 Packaging-unit of 200 kg.
Other packaging/quantity on request.

Lot Size
Höganäs boron carbide powders are available in homogeneous
lots up to 5 tons.

Storage and Handling
Storage and handling are subject to the rules and regulations in the country of
use. Store in a closed container.

Hazards identification in Advertising (REGULATION (EC) No 1272/2008)
None.

Documentation
An inspection document in accordance with EN 10204 is supplied with every
shipment.

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5) Secondary Electron Image (SEI)