

ZHENGZHOU HAIXU ABRASIVES CO.,LTD

<http://www.hxabrasive.cn>

Add: Room 1903,Yaxing Time Square,Songshan Road,Erqi District,Zhengzhou City,Henan Province,China

Tel:+86-371-60300389

Fax:+86-371-60305637

Emergency Telephone Number +86-13526538098



HAIXU ABRASIVES

TECHNICAL DATA SHEET

PRODUCT: Boron Carbide

B₄C CONTENT: 90-99%

DESCRIPTION:

Boron Carbide is one of the hardest man-made materials available in commercial quantities that has a finite melting point low enough to permit its relatively easy fabrication into shapes. Some of Boron Carbide's unique properties include: high hardness, chemical inertness, and a high neutron absorbing

TYPICAL CHEMICAL ANALYSIS [%]:

Size-Grit	Approx Size(microns)	B%	C%	B+C%
F60	300-250	76-80	17-22	95-99
F80	212-180	76-80	17-22	95-99
F100	150-125	76-80	17-22	95-99
F120	125-106	76-80	17-22	95-99
F150	106-75	76-80	17-22	95-99
F180	75-63	76-80	17-22	95-99
F220	63-53	76-80	17-22	95-99
F230	53.0±3.0um	75-79	17-21.5	95-97
F240	44.5±2.0um	75-79	17-21.5	95-97
F280	36.5±1.5um	75-79	17-21.5	95-97
F320	29.2±1.5um	75-79	17-21.5	95-97
F360	22.8±1.5um	75-79	17-21.5	95-97
F400	17.3±1.0um	75-79	17-21.5	95-97
F500	12.8±1.0um	75-79	17-21.5	95-97
F600	9.3±1.0um	74-79	17-21.5	93-97
F800	6.5±1.0um	74-79	17-21.5	93-97
F1000	4.5±0.8um	74-79	17-21.5	93-97
F1200	3.0±0.5um	74-79	17-21.5	93-97
F1500	2.0±0.4um	74-79	17-21.5	93-97
F2000	1.2±0.3um	75-78	17-21.5	93-97
-325	-45um	75-80	17-21	93-97
-25 um	-25 um	75-80	17-21	93-97
-0.5um	-0.5um	75-80	17-21	93-97

PHYSICAL PROPERTIES

Molecular Weight (g/mol.)	Theoretical Density (g/cm ³)	Melting Point (° C)	Boiling Point (° C)
55.25515	2.52	2450-2723	3500
Specific Heat (cal-mol-c)	Specific Gravity	Knoop Hardness	Crystallography
12.5	2.51	2750	Mono-crystalline

APPLICATIONS :**1.Application of B4C in military industry**

B4C can be used to produce bulletproof materials, such as bulletproof plate in bulletproof vests, ceramic bulletproof tile in military airplane pilot cabin and bulletproof plate in modern armored personnel vehicle and tank. It can also be used to produce the nozzles of gun and artillery in munitions industry.

For Nuclear Industry

B4C can be prepared into controlling bars, adjusting bars, accident bars, safety bars, screen bars, radiation resistant B4C tilts, plate, or neutron absorber(prepared with high B10 content powders),and radiation resistant layer for atomic reactor together with cement which is the most important functional component only next to reactor fuel.

2.For Refractories Industry

B4C can be used as anti-oxidation agent for low carbon magnesia carbon brocks and castable. It can be applied in key positions which suffer from serious erosion and high temperature, such as ladle, taphole(nozzle),sliding plate and stopper.

3.For Other Engineering Ceramic Materials

B4C can be prepared into nozzles for sand spraying machine and high pressure water cutter, ring seal, mould for ceramics etc

4.For Normal Industry Fields

grinding and polishing materials, water cutting abrasives and polishing materials for diamond abrasives tools; polishing and grinding of jewels.

5.Application of B4C on Electrical Property

B4C-graphite thermocouple is composed of graphite pipe, B4C bar and BN Lining.In inert gases and vacuum, its service temperature is 2200°C,the linear relation of electric potential difference and temperature is good

6.Application of B4C as Chemical Material

After being activated nu halogens, B4C powder can be used as boronation agent of steel and other alloys for boronizing on the steel surface, forming a thin iron boride layer, increasing the strength and wear resistance of the materials.

PACKING:

20kgc paper bags/Drums+Pallet

The shown values are typical characteristics of the material and shall not be used to prepare specifications. They are submitted to tolerances of the production and meet the present standard of technique. We reserve our right for changes within the scope of technical progress or internal improvement..

郑州市海旭磨料有限公司
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