



BORON CARBIDE (B₄C) - 0.7 μM

HIGH PURITY SUBMICRON BORON CARBIDE

ABOUT:

Boron Carbide (B₄C) is one of the hardest man made materials available. Above 1300°C it is even harder than diamond and cubic boron nitride. It has a 4-point flexural strength of 50,000-70,000 psi and a compressive strength of 414,000 psi, depending on density. Boron Carbide also has a low thermal conductivity (29-67 W/mK) and has electrical resistivity ranging from 0.1-10 ohm-cm.

APPLICATIONS:

With its strength to weight ratio and low thermal conductivity, Boron Carbide is ideal for a wide variety of applications including blasting nozzles, body armor, ceramic & metal-matrix composites, aerospace applications, refractory anti-oxidant, lapping, honing stones, nuclear technology, ultrasonic machining, and many others.

TYPICAL CHEMICAL ANALYSIS

B to C Ratio	3.6 - 3.9
Total B+C	98.3%
Boron	76.5%
Carbon	21.8%
Iron	1146 ppm
Oxygen	2.01%
Nitrogen	0.24%

TYPICAL PHYSICAL PROPERTIES

Crystal Structure:	Rhombohedral
Hardness:	Knoop: 2800 / Mohs: 9.6
Specific Gravity:	2.52 g/cc
Density:	2.45 c/cc
Specific Gravity:	2.52 g/cc
Surface Area:	11.45 - 12.15 m ² /g
Median Particle Size:	0.676 microns



701 Willet Road, Buffalo, NY 14218
 Phone: 716-822-2500
info@electroabrasives.com
www.electroabrasives.com



U.S. ELECTROFUSED MINERALS, INC.
 600 Steel Street, Aliquippa, PA 15001
 Phone: 800-927-8823
www.usminerals.com



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