

## BORON CARBIDE POWDER ( B<sub>4</sub>C ) for Nuclear Applications

**Technical data**

<b>Chemical composition:</b>	
<b>Appearance</b> (dry state):	Color Black
Chemical formula:	B <sub>4</sub> C Application
<b>Grade</b>	<b>NG</b> (Nuclear)
B + C min.	98
B (Boron) min.	76
C (Carbon) max.	24
B <sub>2</sub> O <sub>3</sub>	0.1
Fe (Iron) max.	0.1
Si (Silicon)	0.01
N (Nitrogen)	0.5
Isotope B10 (atomic weight)	19.5-21.5%
<b>Physical data:</b>	
Knoop hardness (0.1)	3000
Mohs hardness	< 9.5
Specific gravity:	2.51
Melting point:	2723 °F
Structure:	Monocrystalline

## Note:

- 1 Diamond's Mohs hardness is 10.
- 2 \*Barn is unit of area equal to 10<sup>-24</sup> sq. centimeters, used to measure cross sections in nuclear physics.

	Grade	Average Particle Size	Typical Application	Notes
1.	NG112M	112 micron	Additive to concrete	B < 75%
2.	NG36L	36 micron		B < 70%
3.	NG24H	24 micron	Nuclear Shielding Panels, Reaction Control Rods, Etc.	B > 76%
4.	NG24HE	24 micron		B > 76% + Enhanced Heat Transfer Capability
5.	NG100H	100 micron		B > 76%
6.	NG100HE	100 micron		B > 76% + Enhanced Heat Transfer Capability
7.	NG6H	6 micron		B > 76%
8.	NG6HE	6 micron		B > 76% + Enhanced Heat Transfer Capability

## Note:

- 1 Custom products are available on request.
- 2 Standard packaging in 100 lb (30 gal.) fiber drums. Custom packaging is available on request.