

BASIC PROPERTIES

- Low thermal conductivity
- Low density
- Sensible to thermal shocks
- Exceptionnal hardness
- Very high resistance to compression
- Excellent wear resistance
- Good neutron absorption
- High elastic modulus

APPLICATIONS

Neutron absorption /
radioactivity uptake
Buses pour boues abrasives
Nozzles for abrasive slurries
Ballistic protection: amored
plates, shielding...

MATERIAL		BORON CARBIDE
Chemical Formula		B4C
Aspect / color		Grey / Black
Porosity	%	<3
Mechanical		Measuring unit
Hardness (Vickers)	kgf mm-2	3200
Hardness Knoop		2800-3500
Tensile modulus	GPa	440-470
Compression resistance	MPa	1400-3400
Tensile resistance	MPa	48
Physical		
Continuous maximum temperature use	°c	600-800
Density	g/cm3	2,45-2,52
Volume resistivity at 25°C	Ohms.cm	0,1-10
Thermal		
Melting point	°c	2450
Specific heat at 25°	J K-1 kg-1	950
Thermal expansion coefficient	@20-1000C (x10-6 K-1)	5,6
Thermal conductivity	W m-1 K-1	30-90
Chemical		
Resistance to concentrated acids		Passable
Resistance to diluted acids		Good
Alkalis resistance		Passable

**These values are for informational purposes only and do not bind company's responsibility.*