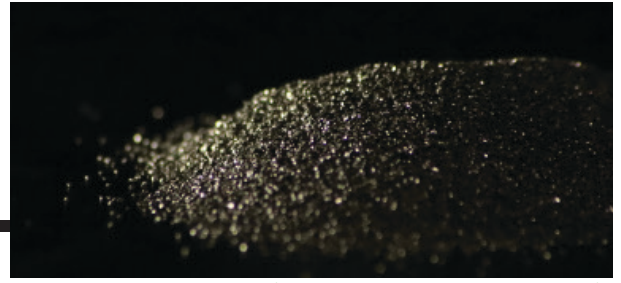




GNP Graystar

Specialty Materials



TECHNICAL DATA SHEET

Boron Carbide - Macrogrits & Microgrits

Typical Chemistry

Boron Carbide (B ₄ C)	98.30 %
Total Boron (B)	78.07 %
Free Carbon (C)	20.55 %
Iron Oxide (Fe ₂ O ₃)	0.07 %
Soluble B ₂ O ₃	0.07 %

Physical Characteristics

Color	Black
Crystal Form	Rhombohedral
True Density	2.52 g/cm ³
Melting Point	2350°C
Hardness	Knoop (100): 2800 Mohs 9.3 +

Test Methods

Macrogrit Sizing	FEPA F Standard 42-1:2006 Sizes 8 - 220 Grit Custom Sizes Available
Microgrit Sizing	FEPA F Standard 42-2:2006 JIS R 6001-1987 325/F Custom Sizes Available

Description:

GNP Graystar's Boron Carbide is produced by the carbothermal reduction of B₂O₃ in an electric arc furnace. The resulting ceramic product is one of the hardest materials available behind cubic boron nitride and diamond.

Applications:

GNP Graystar's Boron Carbide Macrogrits are used in refractory mixes, lapping, ultrasonic machining, grinding materials, and as a chemical precursor for the production of boron halides and metal borides - example Boron Trichloride (BCl₃).

GNP Graystar's Boron Carbide Microgrits can be used in a variety of applications such as: wiresaw slicing of sapphire, neutron absorption, armor and armor tiles, blasting nozzles, refractory additive, sintering aid, and various ceramic pieces.

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