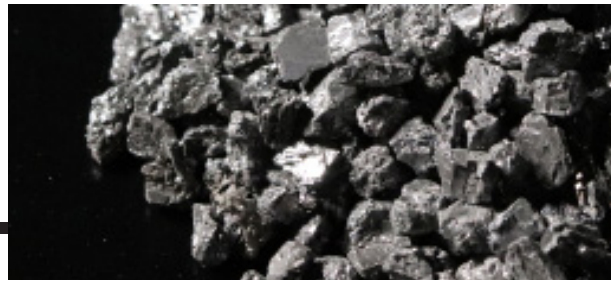




# GNP Graystar

Specialty Materials



## TECHNICAL DATA SHEET

### Black Silicon Carbide

#### Typical Chemistry

|  | Macrogrits | Microgrits |
|--|------------|------------|
| Silicon Carbide (SiC)                  | 98.00 %    | 98.60 %    |
| Free Carbon (C)                        | 0.25 %     | 0.15 %     |
| Silicon Dioxide (SiO <sub>2</sub> )    | 0.70 %     | 0.60 %     |
| Free Silicon (Si)                      | 0.80 %     | 0.50 %     |
| Iron (Fe <sub>2</sub> O <sub>3</sub> ) | 0.10 %     | 0.08 %     |

#### Physical Characteristics

|               |                                 |
|---------------|---------------------------------|
| Crystal Form  | Hexagonal (Alpha SiC)           |
| True Density  | 3.21 g/cm <sup>3</sup>          |
| Melting Point | Dissociates at Approx. 2500°C   |
| Color         | Black, Greyish                  |
| Hardness      | Knoop (100): 2500<br>Mohs: 9.0+ |

#### Test Methods

|                  |   |
|------------------|---|
| Chemistry        | ANSI B74.15   |
| Bulk Density     | ANSI B74.4  |
| Macrogrit Sizing | FEPA F Standard 42-1:2006<br>FEPA P Standard 43-1:2006<br>ANSI B74.12-2003<br>Customer Specific Standards |
| Microgrit Sizing | FEPA F Standard 42-2:2006<br>FEPA P Standard 43-2:2006<br>JIS R 6001-1987<br>Custom Sizes Available       |

#### Description:

GNP Graystar's Black Silicon Carbide is produced in an electrical resistance arc furnace with quartz and petroleum coke as its primary raw materials. The final product is sharp and friable with outstanding electrical and thermal conductivity properties.

GNP Graystar's Black Silicon Carbide grains and powders are produced using various techniques to optimize shape, surface area, and density.

#### Applications:

GNP Graystar's Black Silicon Carbide is used for bonded and coated abrasives, wiresawing semiconductor materials, lapping, pressure blasting, refractory materials, precision ceramics, non-woven abrasive production, anti-skid, and other critical applications.

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