



Henan Silk Road Abrasives & Tools



TECHNICAL DATA SHEET *Black Silicon Carbide*

Typical Chemistry

	Macrogrits	Microgrits
Silicon Carbide (SiC)	98.30 %	98.60%
Free Carbon (C)	0.25%	0.15 %
Silicon Dioxide (SiO ₂)	0.70 %	0.60 %
Free Silicon (Si)	0.80 %	0.50 %
Iron (Fe ₂ O ₃)	0.10 %	0.08 %

Test Methods

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

Physical Characteristics

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

Silk Road Abrasives' Black Silicon Carbide is an engineered material manufactured in an electric resistance furnace using high-purity quartz sand and petroleum coke as primary raw materials. It presents a black color and features a hexagonal α -type crystal structure. Primarily utilized in refractories, metallurgical additives, and for cutting and grinding brittle non-metallic materials like glass, ceramics, stone, cast iron grinding, and certain non-ferrous metal parts. The Black Silicon Carbide particles and powders from Silk Road Abrasives are produced using a variety of techniques to optimize their shape, surface area, and density.

Abrasive Industry: Coated abrasives, bonded abrasives, solar silicon wafer cutting, crystal cutting, and grinding.

Refractory Industry: Manufacturing of high refractory materials, high-temperature ceramics, aircraft heat-resistant materials.

Special Coatings Industry: Enhancing coating hardness and wear resistance, providing high-temperature resistance, increasing chemical corrosion resistance, etc.

<https://www.silkroadabrasives.com/>

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