

GRAYSTAR LLC

A Manufacturer and Distributor of
Abrasive Materials and Specialty Products

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Technical Data Sheet

Product: Black Silicon Carbide Powders (Microgrits)

Description: High quality, water classified silicon carbide powders graded to exacting standards, e.g. FEPA, JIS and custom. Graystar silicon carbide powders are manufactured by various techniques to optimize shape, surface area, density, chemistry and/or particle size distribution for various applications.

Applications: Our powders are used for wiresawing semiconductor materials, lapping, fine bonded and coated application, refractory, precision ceramics, composites and other critical applications. Material is available for hot pressing, sintering and other forming techniques.

Typical Chemical Analysis:

Silicon Carbide (SiC)	97.80%
Silicon (Si)	0.30%
Silicon Dioxide (SiO ₂)	0.50%
Carbon (C)	0.30%
Iron (Fe)	0.08%
Aluminum (Al)	0.10%

Physical Characteristics:

Crystal Form: Hexagonal (Alpha SiC)
True Density: 3.95 g/cm³
Hardness: Knoop (100) – 2500; Mohs 9.0+
Melting Point: SiC does not melt but dissociates
Color: Black

FEPA F Standard – Powders/Microgrits

	D3%		D94%
Size	Max.	D50%	Min.
240	70	42.5-46.5	28
280	59	35.0-38.0	22
320	49	27.7-30.7	16.5
360	40	21.3-24.3	12
400	32	16.3-18.3	8
500	25	11.8-13.8	5
600	19	8.3-10.3	3
800	14	5.5-7.5	2
1000	10	3.7-5.3	1
1200	7	2.5-3.5	1(80%)

Sizing Test Methods:

FEPA Standard 42-2: 2006
JIS R 6001: 1998
Micron sizes based on Coulter Multisizer

Packaging & Shipping:

Warehousing in Bluffton, SC and Niagara Falls, NY
50 lb. or 55 lb. paper bags (grade sizes F280 – F1200)
44 or 55 lb. paper bags or boxes (JIS #600 - #4000)
300 lb. fiber drums (grade sizes F280 – F600)
200 lb. fiber drums (grade sizes F800 – F1200)
2200 lb. supersacks
Plastic pails, etc for a surcharge (SC only)