

GRAYSTAR[★]LLC

Ceramic Minerals and Specialty Materials

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Technical Data Sheet

Product: Silicon Carbide Microgrits (powders) – Green and Black

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 applications, refractory, precision ceramics, composites and other critical applications. Material is available for hot pressing, sintering and other forming techniques.

Typical Chemical Analysis:

	<u>Black</u>	<u>Green</u>
Silicon Carbide (SiC)	97.80%	99.15%
Silicon (Si)	0.30%	0.14%
Silicon Dioxide (SiO ₂)	0.50%	0.34%
Carbon (C)	0.30%	0.11%
Iron (Fe)	0.08%	0.09%
Aluminum (Al)	0.10%	

Physical Characteristics:

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

Test Methods:

Sizing: FEPA Standard 42-GB-1984-R1993
JIS R 6001-1987
Micron sizes based on Coulter Multisizer

Packaging & Shipping:

Warehousing in Bluffton, SC and Niagara Falls, NY
50 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)

FEPA F Standard

Size	D3% Max.	D50%	D94% 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	12.0
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%)

Manufacturers and Distributors of Abrasive Materials