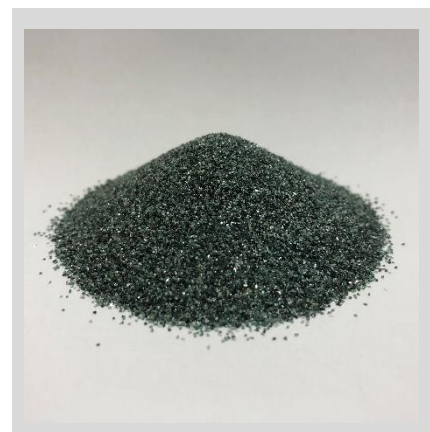




Green Silicon Carbide (GC)

Green silicon carbide is produced by petroleum coke, quality silicon sand and appended with salt in an electric arc furnace at high temperatures. The hardness is higher than synthetic corundum, but lower than diamond. Mechanical strength is higher than corundum. The materials are used to grind hard and brittle metal, non-ferrous metals like copper, brass, aluminum and magnesium, and non-metallic materials such as gem, optical glass, ceramics, etc.



Grain Usages and Types		
Usage	For bonded abrasives	For coated abrasives
Type	GC	GC-P

Physical Characteristics					
Item	Basic mineral	Crystal system	Crystal color	Mohs hardness	Density
Green silicon carbide	α - SiC	Hexagonal	Green	9.15	$\geq 3.18\text{g/cm}^3$
Item	Micro hardness	Electrical resistivity	Grinding ability (compared with diamond as one)	Linear expansion coefficient (when 900°C $\alpha \cdot 10^{-6}\text{k}^{-1}$)	
Green silicon carbide	HV3280-3400	3×10^5 - $3 \times 10^7 \Omega \cdot \text{cm}$	0.28	4.6	



Chemical Composition (GB/T 2480-2008)				
Type	Grit	Chemical composition (%, by weight)		
		SiC	F.C	Fe ₂ O ₃
GC	F4-F90	≥99.10	≤0.20	≤0.20
	F100-F150	≥98.60	≤0.25	≤0.45
	F180-F220	≥98.00	≤0.25	≤0.50
	F230-F280	≥98.00	≤0.30	≤0.50
	F320-F500	≥97.50	≤0.30	≤0.50
	F600-F800	≥97.00	≤0.35	≤0.50
	F1000-F1200	≥96.50	≤0.40	≤0.50
GC-P	P12-P100	≥99.10	≤0.20	≤0.20
	P120-P150	≥98.60	≤0.25	≤0.45
	P180-P220	≥98.00	≤0.25	≤0.50
	P240-P360	≥98.00	≤0.30	≤0.50
	P400-P1000	≥97.50	≤0.30	≤0.50
	P1200-P1500	≥97.00	≤0.35	≤0.50
	P2000-P2500	≥96.50	≤0.40	≤0.50

Note: Special requirement on chemical composition can be satisfied through discussion.

Optional Particle Sizes	
Product Category	Particle Size
GC	F4-F220, F240-F1200, P12-P220, P240-P2500, JIS240#-4000# etc.

Note: Special specification can be customized according to customer's requirements.