Black Silicon Carbide (C)

Black silicon carbide is produced by petroleum coke, quality silicon sand and appended with salt in an electric arc furnace at high temperatures. The hardness and brittleness are lower than that of green silicon carbide. The materials are used to grind cast iron, non-ferrous metals, rubber, leather, plastic, wood, mineral rocks, etc. It can also be used to manufacture high-class refractory products.

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

Physical Characteristics					
Item	Basic mineral	Crystal system	Crystal color	Mohs hardness	Density
Black silicon carbide	α- SiC	Hexagonal	Black	9.15	≥3.12g/cm^3
Item	Micro hardness	Electrical resistivity	Grinding ability (compared with diamond as one)	Linear expansion coefficient (when 900℃ α•10^{-6}k^{-1})	
Black silicon carbide	HV3100-3280	3×10^5-3×10^{7}Ω•cm	0.25	4.4	

Chemical Composition (GB/T 2480-2008)				
Type	Grit	Chemical composition（%，by weight）		
		SiC	F.C	Fe_2O_3
C	F4-F90	≥98.60	≤0.20	≤0.40
	F100-F150	≥98.10	≤0.25	≤0.50
	F180-F220	≥97.20	≤0.30	≤0.55
	F230-F280	≥97.20	≤0.30	≤0.55
	F320-F500	≥97.00	≤0.35	≤0.60
	F600-F800	≥96.50	≤0.40	≤0.60
	F1000-F1200	≥95.50	≤0.50	≤0.70
C-P	P12-P100	≥98.60	≤0.20	≤0.40
	P120-P150	≥98.10	≤0.25	≤0.50
	P180-P220	≥97.20	≤0.30	≤0.55
	P240-P360	≥97.20	≤0.30	≤0.55
	P400-P1000	≥97.00	≤0.35	≤0.60
	P1200-P1500	≥96.50	≤0.40	≤0.60
	P2000-P2500	≥95.50	≤0.50	≤0.70

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

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

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