

BLACK SILICON CARBIDE

Product Information



SIC used for Bonded Abrasives & Sandblasting Application

Black Silicon Carbide is fused by high purity silica sand and Petroleum Coke in a big electrical resistance furnace at high temperature. The SIC grain is hard, sharp, friable with big crystals; it has high strength, outstanding abrasion resistance and low thermal expansion, which makes SIC products sharper, cut faster and produce finer scratch patterns on most surfaces, particularly suitable for making high quality resin /vitrified bonded grinding wheels, cut-off or snagging wheels, flap-discs, dry or wet sandblasting, lapping and polishing. It is also an excellent choice for recycling times.



Physical Properties

Crystal Form	:	Alpha SiC
Particle Shape	:	Blocky, Sharp edged
Color	:	Black
Friability	:	Semi-friable
Melting Point	:	Dissociates at Approx. 2500°C
Bulk Density	:	1.20-1.60g/cm ³
True Density	:	3.20g/cm ³ Min
Mohs Hardness	:	9.1
Knoop Hardness	:	2550kg/mm ²

Chemical Composition

Type & Grade	Grit Size	Chemical Composition (% by weight)			B.D.(g/cm ³)
		SiC	F.C	Fe2O3	
C	F12~F90	≥98.5	≤0.10	≤0.15	1.37-1.60
	F100~F220	≥98.0	≤0.20	≤0.30	1.29-1.48
	F240-F1200	≥97.5	≤0.30	≤0.40	1.10-1.45

Available Grit Sizes

We offer Black SIC both Macro and Micro grains complying with the current FEPA / JIS / ANSI sieve standards.

For Bonded Abrasives Application:**FEPA F**

Macro: F12, F24, F30, F36, F40, F46, F54, F60, F80, F100, F120, F150, F180, F220

Micro: F240, F280, F320, F360, F400, F500, F600, F800, F1000, F1200

Particle Size Distribution for available grits

FEPA 42-2:2006

Macro Grits			Micro Grits		
Grit no.	Mean Diameter (μm)	B.D (g/cm ³)	Grit no.	D50 value(μm)	B.D (g/cm ³)
F12	1700	1.41-1.51	F230	53.0 \pm 3	1.34-1.54
F14	1400	1.42-1.52	F240	44.5 \pm 2	1.33-1.53
F16	1180	1.44-1.54	F280	36.5 \pm 1.5	1.31-1.51
F20	1000	1.44-1.54	F320	29.2 \pm 1.5	1.20-1.40
F24	710	1.46-1.56	F360	22.8 \pm 1.5	1.18-1.39
F30	600	1.47-1.57	F400	17.3 \pm 1	1.10-1.30
F36	500	1.47-1.57	F500	12.8 \pm 1	1.05-1.27
F40	425	1.49-1.59	F600	9.3 \pm 1	0.90-1.10
F46	355	1.48-1.58	F800	6.5 \pm 1	0.85-1.07
F54	300	1.48-1.58	F1000	4.5 \pm 0.8	NA
F60	250	1.47-1.57	F1200	3.0 \pm 0.5	NA
F70	212	1.45-1.55			
F80	180	1.43-1.53			
F90	150	1.41-1.51			
F100	125	1.42-1.52			
F120	106	1.40-1.50			
F150	75	1.37-1.47			
F180	60	1.35-1.45			
F220	53	1.35-1.45			

Packaging

Standard Packaging:

- Big bags(1000kgs, 1250kgs, 1350kgs...) with or without pallets;
- 20 or 25kg plastic.or paper bags, with or without pallets.

*Custom Packaging is available upon request



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