



CUMIHEAT



BLACK SILICON CARBIDE

Black Silicon Carbide (SiC) is an extremely hard man made mineral that possesses high thermal conductivity (100 W/m-K). It also has high strength at elevated temperatures (at 1000°C, SiC is 7.5 times stronger than Al₂O₃). SiC has a modulus of elasticity of 410 GPa, with no decrease in strength up to 1600°C, and it does not melt at normal pressures but instead dissociates at 2600°C.

APPLICATION

CUMIHEAT black silicon carbide for refractory applications is made from selected quality raw materials to reduce the impurities to enhance high temperature properties. **CUMI's** black silicon carbide refractory grains are used in the manufacture of high temperature refractories, kiln furniture, bricks, monolithic and other refractory shapes.

GRAIN SIZES AVAILABLE

0-1 mm, 1-3 mm, 3-5 mm, 7/12, 14/30, 36/70, 80/180 and 220/F
Customer specific size can be supplied as request.

TYPICAL PROPERTIES

Physical Properties		
Property	Unit	Value
Hardness	Mohs Scale	9.5
Hardness	Knoop Scale (Kg/mm ²)	2500
Specific gravity		3.2

Chemical composition		
Constituent	Value *	Value *
SiC	97.90 %	97.90 %
Free C	0.32 %	0.40 %
Si+SiO ₂	1.20 %	1.30 %
Fe ₂ O ₃	0.28 %	0.60 %
Al ₂ O ₃	0.24 %	0.24 %

* Analyzed for Grit 14/30

* Analyzed for Grit 100/F

BULK DENSITY (TYPICAL)					
Grit	g/c	Grit	g/c	Grit	g/c
7/12	1.40	10/24	1.47	200/F	1.40
14/30	1.56	12/20	1.46	8/24	1.50
36/70	1.56	14/24	1.48	8/45	1.55
80/180	1.55	100/F	1.44	-45	1.65
220/F	1.45	150/F	1.43		

Packing: 25 kg multiply paper bags of 1000 kg palletized. Other packaging types on request

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