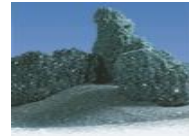
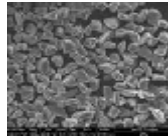
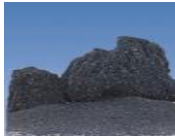


## Silicon Carbide and Silicon Carbide Powder



### 1. Brief

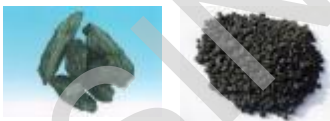
The Silicon Carbide (SiC) is one kind of silicon materials which is a non-metallic, non-mineral product generated from quartz sand (SiO<sub>2</sub>) and anthracite coal or petroleum coke(C) under temperature as high as 1,800-2,000°C Celsius. It can be normally clarified into black and green silicon carbide depending on the variance of its raw material. Due to its high hardness, low expansion coefficients and good thermal conductivity, it is widely used in abrasives, abrasive cutting electronic products, refractories, special ceramics, foam ceramic, paint, plastics and rubber modified, auto parts, military aviation, steelmaking deoxidation, and pv industry for solar energy etc.

The Silicon Carbide Powder is one kind of micro-meter and nanometer powders which is produced and processed through crushing and sieving from silicon carbide grains and then reached to the powder which will be determined exactly per the final using target and purpose in the different industries.

We are now providing the Black and Greene SiC lump, grain and powder in China and cover the world wide market according to China National Standard GB/T2480-2008, International Standard (ISO), European Standard (FEPA) and Japanese Standard (JIS).

### 2. Type and Typical Data

#### 2.1. Silicon Carbide Lump, Block, Grain and Sand

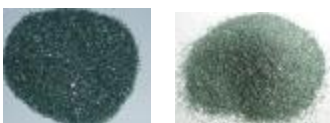


We are now providing Silicon Carbide Lump, Block, Grain and Sand according to the FEPA standard including Black and Green type with the following types and specifications:

F6#、F8#、F10#、F12#、F16#、F20#、F22#、F24#、F30#、F36#、F40#、F46#、F54#、F60#、F70#、F80#、F90#、F100#、F120#、F150#、F180#、F220#、F240#.

Meanwhile, we may also provide you a variety of models depending on the different standards, as well as non-standard products per the user's demands.

#### 2.2. Silicon Carbide Micro-Powder



The silicon carbide micro-powder is crushed silicon carbide block being processed by Ramon a milling machine, jet mill, ball mill and shaping machine into a micro-meter level powder. We now are providing SiC micro powder including Black and Green type

according to the FEPA standard and JIS standard with the following types and specifications:

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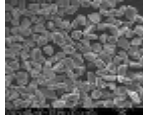
**European Standards (FEPA):**

F240#、F280#、F320#、F400#、F500#、F600#、F800#、F1000#、F1200#、F1500#、F1800#.

**Japanese Standards (JIS):**

#240、#280、#320、#360、#400、#500、#600、#700、#800、#1000、#1200、#1500、#2000、#2500、#3000、#4000、#6000、#8000.

Meanwhile, we are also providing other standards and non-standard products according to the user's demands per the exact chemical components and size and size distributions.

**2.3. Silicon Carbide Nanometer Powder**

We now are also providing Nanometer grade Silicon Carbide Powder including Black and Green type per the users' demands.

The size and size distributions shall be designed per the user's request and depending our current techniques and related producing facilities.

The final and exact specifications such as chemical components and size shall be finalized with the users together before order and producing.

**3. Packing, Loading and Shipment**

We currently provide the packing by kraft paper bag and/or jumbo bag including inner plastic bag with 25 to 1000Kg per package, and load on heat-treated pallet with 500 to 1000Kg each. The shipment for oversea market shall be arranged by one container minimum per order and/or per shipment by sea.

**4. Key Specifications**

The key specifications of the Silicon Carbide shall be including:

**4.1. Physical Properties:**

Color and type: Black Silicon Carbide (B-SiC), Green Silicon Carbide (G-SiC)

Density: Typical Data for Green SiC shall be less than 3.18g/cm<sup>3</sup>, and Black SiC shall be more than 3.12g/cm<sup>3</sup>.

Ferroalloys particles: Determined per the confirmed Standard.

Magnetic: The typical data shall be less or equal to 0.2% per the confirmed Standard.

Hardness: 2800 to 3350Kg/MM<sup>2</sup>

**4.2. Chemical Components:**

SiC: 80% to 99% min. per the user's demands and according to the confirmed Standard.

F.C. 0.2% to 5% max. per the user's demands and according to the confirmed Standard.

Fe<sub>2</sub>O<sub>3</sub>: 0.2% to 5% max. per the user's demands and according to the confirmed Standard.

**4.3. Size and Size Distributions:**

The size and size distributions shall be determined and controlled once conclude the Standard for the production per the user's demands. We now provide micro meter level from 0.5 to 100u and nanometer level from 20 to 500 nanometers.

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## 5. Application and Using Target

Since the Silicon Carbide contains high hardness, low expansion coefficients and good thermal conductivity, so it is widely used in the following industries:

### 5.1. Abrasive Industry

Since the silicon carbide contains high hardness, low expansion coefficients and good thermal conductivity, so it now becomes one of key materials for producing of abrasive and related abrasive products. The coated silicon carbide grain, sand and micro powder are mainly used in coated abrasives such as sandpaper, and belt.

Meanwhile, it is also one of good and reliable materials for the performance of the quality for cutting tools in the mechanical industry.

### 5.2. Refractory Industry

The silicon carbide is one of refractory material which is mainly used in the charge of high temperature, high temperature materials, refractory products, and steelmaking deoxidation agent. Refractory products and mainly products with a silicon carbide content of 88% -90%, 80% -85%, 70% -75% and a product particle size of 10mm-0, 5mm-0, 3mm-0, 1mm-0 200 # -0 etc.

### 5.3. Ceramic Industry

Concerning its hardness and low expansion coefficients, the silicon carbide is also one of main materials in the ceramic industry which is widely used in silicon carbide ceramic products, including reaction sintered silicon carbide ceramics and pressureless sintered silicon carbide ceramics, silicon carbide nozzles, silicon carbide high temperature ceramic, desulfurization, electricity, seals, flak bulletproof armor, ceramic foam filters, brake pads and so on.

### 5.4. Chemical and Steel Industry

Due to the hardness, stability and metallic luster, the silicon carbide are widely used in the chemical industry including the painting, plastic and rubber production. The nanometer powder are also used for thin film, fiber and polishing concerning about the infrared absorbing and wave ability.

Meanwhile, the silicon carbide is also one of additional materials in the steel industry for improve the steel quality performance.

### 5.5. Auto and Military Aviation Industry

Concerning about the silicon carbide special properties and related using target, the silicon carbide now also becomes one of materials for producing of some of spare parts in the Auto, Military and Aviation industry. Take the battery cathode for example, the silicon carbide now becomes one of the key materials for producing of the battery cathode due to its high purity, dispersion performance, specific surface area, high surface activity, low apparent density which may improve the lithium battery capacity and service life.

### 5.6. Photovoltaic Industry.

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Depending on the high hardness, low expansion coefficients, good thermal conductivity and especially about the refractoriness under load, the silicon carbide powder becomes one of good materials for wire cutting of polycrystalline silicon and mono crystalline silicon in the photovoltaic (PV) industry serve for solar energy.

## 6. Contact information

If you have any more enquiry or comments for above mentioned specifications and related information, then please contact us as per the following information:

Sales Hotline: 4008-900-668

Tel: (86-10) 82070681;82070682;82070683

Fax: (86-10) 82070690; 82079576

E-Mail: [sales@sinosi.com](mailto:sales@sinosi.com) or [sales@sinosi.org](mailto:sales@sinosi.org)

[Http://www.sinosi.com](http://www.sinosi.com) or [Http://www.sinosi.org](http://www.sinosi.org)

## 7. Special Note

You are kindly informed that we, Sinosi Group, has the right to adjust, improve and amend any of above items and related terms and conditions without any prior notice due to technical improvement and request per the government laws and regulations. Your kind understanding and cooperation will be appreciated.