

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Silicon Carbide
- English Name: Silicon Carbide
- CAS Number: 409-21-2
- Formula: SiC
- Molecular Weight: 40.10 g/mol
- Product Characteristics: High-purity black/green granular/powder, excellent hardness, heat resistance, and chemical stability. High thermal conductivity and electrical insulation, suitable for high-performance industrial applications.

2. Technical Specifications

Item	Specification
Appearance	Black or green granular/powder
Purity (SiC)	≥ 98.0%
Si Content	69.9-70.9%
C Content	29.1-30.1%
Iron (Fe)	≤ 0.5%
Heavy Metals (Pb)	≤ 0.001%
Moisture Content	≤ 0.2%
Particle Size	10-100 μm (customizable)
Hardness (Mohs)	9.5
Thermal Conductivity (25°C)	80-100 W/(m·K)

3. Product Advantages

- Ultra-high hardness and wear resistance for abrasive applications.
- Excellent high-temperature stability (resistant to oxidation up to 1600°C).
- Good thermal conductivity and electrical insulation.
- High purity and uniform particle size ensure consistent performance.

4. Application Fields

- Abrasives: Grinding wheels, sandpaper, cutting tools for metals, glass, and ceramics.
- Ceramics & Refractories: High-temperature structural ceramics, refractory bricks, kiln linings.
- Semiconductors: Substrates for power electronics, LED packaging materials.
- Composite Materials: Reinforcement for metals, polymers, and ceramics.
- Other: Thermal management materials, welding electrodes, solar cell components.

5. Usage Methods

- Abrasives: Mix with binders to produce grinding tools; or use as loose abrasive.
- Ceramics: Add 20-50% to ceramic formulations, sinter at 1800-2200°C.
- Composite Materials: Blend 15-30% with base material via mechanical mixing.



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- Optimal Conditions: Use at 20-35°C; avoid contact with molten alkalis.

6. Packaging & Storage

- Packaging Specifications: 10 kg/bag (plastic-lined kraft bag), 25 kg/drum (HDPE), 1000 kg/IBC tote.
- Storage Conditions: Store in cool, dry, well-ventilated warehouse. Avoid moisture and direct sunlight. Temperature $\leq 30^{\circ}\text{C}$.
- Shelf Life: 36 months (unopened).
- Transportation: Handled as non-dangerous goods; avoid collision and moisture.

7. Safety & Protection

- Wear dust mask, protective gloves, and safety goggles during handling.
- Avoid dust inhalation and eye contact; rinse immediately if contact occurs.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Each batch accompanied by COA.
- Provide technical support for application and processing.

A large, faded watermark of the Neway Sinophc Tech logo is centered on the page. It consists of a stylized 'N' in blue and green, with the Chinese characters '纳维盈医化科技' and 'NEWAY SINOPHC TECH' below it.

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