SECTION 1: Identification

1.1. Identification

Product name: SILICON CARBIDE, powder
Product code: SIS6959.0
Product form: Substance
Physical state: Solid
Formula: CSi
Synonyms: SILICON CARBIDE, FIBROUS
SILICON CARBIDE WHISKERS
Chemical family: INORGANIC SILICON COMPOUND

1.2. Recommended use and restrictions on use

Recommended use: Chemical intermediate

1.3. Supplier

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
Carcinogenicity Category 1B H350 May cause cancer
Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling
Hazard pictograms (GHS US):

Signal word (GHS US): Danger
Hazard statements (GHS US): H350 - May cause cancer
Precautionary statements (GHS US):
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P405 - Store locked up.
P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Hazards not otherwise classified (HNOC)
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type: Mono-constituent
Name: SILICON CARBIDE, powder
CAS-No.: 409-21-2

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon carbide</td>
<td>(CAS-No.) 409-21-2</td>
<td>97 - 100</td>
<td>Carc. 1B, H350</td>
</tr>
</tbody>
</table>
FULL TEXT OF HAZARD CLASSES AND H-STATEMENTS: SEE SECTION 16

SECTION 4: FIRST-AID MEASURES

4.1. DESCRIPTION OF FIRST-AID MEASURES

First-aid measures general: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of soap and water. Get medical advice/attention.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS (ACUTE AND DELAYED)

Symptoms/effects: May cause cancer.

Symptoms/effects after inhalation: May cause irritation to the respiratory tract.

Symptoms/effects after skin contact: May cause skin irritation.

Symptoms/effects after eye contact: May cause eye irritation.

Symptoms/effects after ingestion: No information available.

4.3. IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NECESSARY

No additional information available.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. SUITABLE (AND UNSUITABLE) EXTINGUISHING MEDIA

Suitable extinguishing media: Not combustible.

Unsuitable extinguishing media: None known.

5.2. SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

Fire hazard: None known.

5.3. SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

6.1.1. FOR NON-EMERGENCY PERSONNEL

Protective equipment: Wear protective equipment as described in Section 8.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. FOR EMERGENCY RESPONDERS

Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. ENVIRONMENTAL PRECAUTIONS

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal.

6.4. REFERENCE TO OTHER SECTIONS

See Heading 8. Exposure controls and personal protection.

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Additional hazards when processed: While not flammable, the ability of particles to generate static charge may present a hazard when used in combination with flammable liquids.

Precautions for safe handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust.
Hygiene measures: Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Storage conditions</th>
<th>Keep container tightly closed. Store locked up.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incompatible materials</td>
<td>None known.</td>
</tr>
<tr>
<td>Storage area</td>
<td>Store in a well-ventilated place. Store away from heat.</td>
</tr>
</tbody>
</table>

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<table>
<thead>
<tr>
<th>Silicon carbide (409-21-2)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>10 mg/m³ (nonfibrous, inhalable fraction, particulate matter containing no asbestos and &lt;1% crystalline silica) 3 mg/m³ (nonfibrous, respirable fraction, particulate matter containing no asbestos and &lt;1% crystalline silica) 0.1 fibers/cm³ (as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination—respirable fibers, including whiskers, length &gt;5 µm, aspect ratio &gt;=3:1)</td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)</td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>10 mg/m³ (total dust) 5 mg/m³ (respirable dust)</td>
</tr>
</tbody>
</table>

#### 8.2. Appropriate engineering controls

Appropriate engineering controls: Provide local exhaust or general room ventilation.

#### 8.3. Individual protection measures/Personal protective equipment

**Personal protective equipment:**
Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

**Hand protection:**
Neoprene or nitrile rubber gloves

**Eye protection:**
Safety glasses. Contact lenses should not be worn

**Skin and body protection:**
Wear suitable protective clothing

**Respiratory protection:**
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>40.1 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Bluish-black to gray.</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>2.65</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>2700 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
</tbody>
</table>
SILICON CARBIDE, powder
Safety Data Sheet

Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : Not combustible
Vapor pressure : < 0.01 mm Hg @ 20°C
Relative vapor density at 20 °C : No data available
Relative density : 3.23
% Volatiles : 100 %
Solubility : Insoluble in water.
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Explosion limits : No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products
None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified

SILICON CARBIDE, powder (409-21-2)
Toxicity information 300 mg/kg  TDLo: rat, ipr

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer. Silicon carbide is a suspected carcinogen with experimental neoplastic/genetic data.

Silicon carbide (409-21-2)

IARC group 2A - Probably carcinogenic to humans
In OSHA Hazard Communication Carcinogen list Yes

Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause irritation to the respiratory tract.
Symptoms/effects after skin contact : May cause skin irritation.
Symptoms/effects after eye contact : May cause eye irritation.
**SILICON CARBIDE, powder**  
Safety Data Sheet

Symptoms/effects after ingestion: No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity
No additional information available

### 12.2. Persistence and degradability
No additional information available

### 12.3. Bioaccumulative potential
No additional information available

### 12.4. Mobility in soil
No additional information available

### 12.5. Other adverse effects
Effect on the ozone layer: No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

<table>
<thead>
<tr>
<th>Sewage disposal recommendations</th>
<th>Do not dispose of waste into sewer.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product/Packaging disposal recommendations</td>
<td>Landfill. Dispose in a safe manner in accordance with local/national regulations.</td>
</tr>
<tr>
<td>Ecology - waste materials</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

## SECTION 14: Transport information

### 14.1. UN number
Not regulated for transport.

### 14.2. UN proper shipping name
Not applicable

### 14.3. Additional information
Other information: No supplementary information available.

<table>
<thead>
<tr>
<th>Transport by sea</th>
<th>No additional information available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air transport</td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Silicon carbide (409-21-2)  
Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

Silicon carbide (409-21-2)  
Listed on the Canadian DSL (Domestic Substances List)

<table>
<thead>
<tr>
<th>WHMIS Classification</th>
<th>Uncontrolled product according to WHMIS classification criteria</th>
</tr>
</thead>
</table>

#### EU-Regulations

Silicon carbide (409-21-2)  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations
Silicon Carbide (409-21-2)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INCS (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)

15.3. US State regulations
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Silicon carbide (409-21-2)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases:

| H350 | May cause cancer |

Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating

Health: 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability: 0 Minimal Hazard - Materials that will not burn
Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 01/23/2017 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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