SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
- Product form: Substance
- Physical state: Solid
- Substance name: SILICON DIOXIDE, amorphous
- Product code: SIS6960.0
- Formula: SiO2
- Synonyms: FUMED SILICA; PYROGENIC SILICA
- Chemical family: INORGANIC SILICATE

1.2. Relevant identified uses of the substance or mixture and uses advised against
- Use of the substance/mixture: Chemical intermediate
  For research and industrial use only

1.3. Details of the supplier of the safety data sheet
- 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: Hazards identification

2.1. Classification of the substance or mixture
- Classification (GHS-US): Not classified

2.2. Label elements
- GHS-US labeling: No labeling applicable

2.3. Other hazards
- No additional information available

2.4. Unknown acute toxicity (GHS US)
- No data available

SECTION 3: Composition/information on ingredients

3.1. Substance
- Substance type: Mono-constituent
- Name: SILICON DIOXIDE, amorphous
- CAS No: 112945-52-5

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
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<td>Silicon, amorphous</td>
<td>(CAS No) 112945-52-5</td>
<td>97 - 100</td>
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3.2. Mixture
- Not applicable

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. IF exposed or concerned: Get medical advice/attention.

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.
SILICON DIOXIDE, amorphous
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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, both acute and delayed
Symptoms/injuries after inhalation: May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact: May cause skin irritation.
Symptoms/injuries after eye contact: May cause eye irritation.
Symptoms/injuries after ingestion: May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures
5.1. Extinguishing media
Suitable extinguishing media: Not combustible.
Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture
Fire hazard: None known.
Explosion hazard: None known.

5.3. Advice for firefighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. 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
No additional information available

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Additional hazards when processed: While not flammable, the ability of fumed silica to generate static charge may present a hazard when used in combination with flammable liquids.
Precautions for safe handling: Avoid contact with skin and eyes. Use only in well ventilated areas. Avoid dust formation. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust.
Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container tightly closed.
Incompatible materials: None known.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
SILICON DIOXIDE, amorphous
Safety Data Sheet

**SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

- **Physical state**: Solid
- **Appearance**: Powder.
- **Molecular mass**: 60.09 g/mol
- **Color**: White.
- **Odor**: No data available
- **Odor threshold**: No data available
- **Refractive index**: 1.46
- **pH**: No data available
- **Relative evaporation rate (butyl acetate=1)**: No data available
- **Melting point**: > 1600 °C
- **Freezing point**: No data available
- **Boiling point**: No data available
- **Flash point**: No data available
- **Auto-ignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Flammability (solid, gas)**: No data available
- **Vapor pressure**: < 0.01 mm Hg @ 20°C
- **Relative vapor density at 20 °C**: No data available
- **Relative density**: 2.2
- **VOC content**: 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, amorphous (112945-52-5)**

| LD50 oral rat     | 3160 mg/kg ; 8160 mg/kg; >5000 mg/kg |
| ATE US (oral)    | 3160.000 mg/kg body weight           |

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

**Silicon, amorphous (112945-52-5)**

| IARC group | 3 - Not classifiable |
| 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/injuries after inhalation | May cause irritation to the respiratory tract. |
| Symptoms/injuries after skin contact | May cause skin irritation. |
| Symptoms/injuries after eye contact | May cause eye irritation. |
| Symptoms/injuries after ingestion | May be harmful if swallowed. |

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
Other adverse effects : This substance may be hazardous to the environment.
Effect on ozone layer : No additional information available
Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Landfill. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials : Avoid release to the environment.

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.
Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations
Silicon, amorphous (112945-52-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations
Silicon, amorphous (112945-52-5)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
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 INSQ (Mexican national Inventory of Chemical Substances)

15.3. US State regulations

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<td>U.S. - California - Proposition 65 - Developmental Toxicity</td>
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<td>No</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

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.

HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur
Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard

Prepared by safety and environmental affairs.

Date of issue: 09/14/2015 Version: 1.0

SDS US (GHS HazCom 2012) - Custom
SILICON DIOXIDE, amorphous
Safety Data Sheet

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

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