SECTION 1: Identification

1.1. Identification

Product name : SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED
Product code : SIS6962.0
Product form : Substance
Physical state : Solid
Formula : SiO2
Synonyms : FUMED SILICA, HMDZ TREATED
Chemical family : INORGANIC SILICATE

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
Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling
No labeling applicable

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 : Multi-constituent
Name : SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED
CAS-No. : 68909-20-6 / 7631-86-9

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide, amorphous, hexamethyldisilazane treated</td>
<td>(CAS-No.) 68909-20-6</td>
<td>&gt; 97</td>
<td>Not classified</td>
</tr>
<tr>
<td>Silica, amorphous</td>
<td>(CAS-No.) 7631-86-9</td>
<td></td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

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.

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.

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 after inhalation: May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.
Symptoms/effects after skin contact: May cause skin irritation.
Symptoms/effects after eye contact: May cause eye irritation.
Symptoms/effects after ingestion: May be harmful if swallowed.

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.

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: 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
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
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 fumed silica to generate static charge may present a hazard when used in combination with flammable liquids.
Precautions for safe handling: Provide local exhaust or general room ventilation to minimize exposure to dust. Avoid contact with skin and eyes. Do not breathe dust.
Hygiene measures: Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container tightly closed. Store in a dry place. Absorbs moisture. Store in sealed containers.
Incompatible materials: Strong oxidizers.
Storage area: Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th></th>
<th>ACGIH TWA (mg/m³)</th>
<th>OSHA REL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide, amorphous, hexamethyldisilazane treated (68909-20-6)</td>
<td>0.1 mg/m³ (total dust containing &lt;1% quartz)</td>
<td>15 mg/m³ (nuisance dust)</td>
</tr>
<tr>
<td>Silica, amorphous (7631-86-9)</td>
<td>US IDLH (mg/m³)</td>
<td>3000 mg/m³</td>
</tr>
<tr>
<td></td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>6 mg/m³</td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls
Appropriate engineering controls: Provide local exhaust or general room ventilation.
SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED
Safety Data Sheet

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:
Wear respiratory protection. 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>60.09 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>White</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>1.45</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>&gt; 1600 °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>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt; 0.01 mm Hg @ 20°C</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>2.2</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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 dioxide, amorphous, hexamethyldisilazane treated (68909-20-6)
LD50 oral rat: > 5000 mg/kg

Silica, amorphous (7631-86-9)
LD50 oral rat: > 5000 mg/kg
LD50 dermal rabbit: > 2000 mg/kg
LC50 inhalation rat (mg/l): > 2.2 mg/l (Exposure time: 1 h)

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 dioxide, amorphous, hexamethyldisilazane treated (68909-20-6)
IARC group: 3 - Not classifiable

Silica, amorphous (7631-86-9)
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/effects after inhalation: May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.
Symptoms/effects after skin contact: May cause skin irritation.
Symptoms/effects after eye contact: May cause eye irritation.
Symptoms/effects after ingestion: May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Silica, amorphous (7631-86-9)
LC50 fish 1: 5000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1: 7600 mg/l (Exposure time: 48 h - Species: Ceriodaphnia dubia)

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential

Silica, amorphous (7631-86-9)
BCF fish 1: (no bioaccumulation expected)

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

Product/Packaging 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

<table>
<thead>
<tr>
<th>Substance</th>
<th>US Federal regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide, amorphous, hexamethyldisilazane treated (68909-20-6)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Silica, amorphous (7631-86-9)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

15.2. International regulations

CANADA

<table>
<thead>
<tr>
<th>Substance</th>
<th>International regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide, amorphous, hexamethyldisilazane treated (68909-20-6)</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
<tr>
<td>Silica, amorphous (7631-86-9)</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
<tr>
<td>WHMIS Classification</td>
<td>Uncontrolled product according to WHMIS classification criteria</td>
</tr>
</tbody>
</table>

EU-Regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>EU-Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide, amorphous, hexamethyldisilazane treated (68909-20-6)</td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
<tr>
<td>Silica, amorphous (7631-86-9)</td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
</tbody>
</table>

National regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>National regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide, amorphous, hexamethyldisilazane treated (68909-20-6)</td>
<td>Listed on the AICS (Australian Inventory of Chemical Substances)</td>
</tr>
<tr>
<td></td>
<td>Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)</td>
</tr>
<tr>
<td></td>
<td>Listed on the Japanese ENCS (Existing &amp; New Chemical Substances) inventory</td>
</tr>
<tr>
<td></td>
<td>Listed on the Korean ECL (Existing Chemicals List)</td>
</tr>
<tr>
<td></td>
<td>Listed on NZIoC (New Zealand Inventory of Chemicals)</td>
</tr>
<tr>
<td></td>
<td>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)</td>
</tr>
<tr>
<td></td>
<td>Listed on CICR (Turkish Inventory and Control of Chemicals)</td>
</tr>
<tr>
<td>Silica, amorphous (7631-86-9)</td>
<td>Listed on the AICS (Australian Inventory of Chemical Substances)</td>
</tr>
<tr>
<td></td>
<td>Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)</td>
</tr>
<tr>
<td></td>
<td>Listed on the Japanese ENCS (Existing &amp; New Chemical Substances) inventory</td>
</tr>
<tr>
<td></td>
<td>Listed on the Korean ECL (Existing Chemicals List)</td>
</tr>
<tr>
<td></td>
<td>Listed on NZIoC (New Zealand Inventory of Chemicals)</td>
</tr>
<tr>
<td></td>
<td>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)</td>
</tr>
<tr>
<td></td>
<td>Listed on the Canadian IDL (Ingredient Disclosure List)</td>
</tr>
<tr>
<td></td>
<td>Listed on INSQ (Mexican National Inventory of Chemical Substances)</td>
</tr>
<tr>
<td></td>
<td>Listed on CICR (Turkish Inventory and Control of Chemicals)</td>
</tr>
</tbody>
</table>

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
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; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating
- Health: 2 Moderate Hazard - Temporary or minor injury may occur
- 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: 01/09/2015  Revision date: 07/09/2019  Version: 1.2

© 2019 Gelest Inc. Morrisville, PA 19067