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

1.1. Product identifier

Product form: Substance
Physical state: Solid
Substance name: DIATOMACEOUS EARTH, calcined
Product code: SID2754.2
Formula: SiO2
Synonyms: SILICON DIOXIDE, DIATOMACEOUS; DIATOMACEOUS EARTH; KIESELGUHR, SODA ASH, FLUX CALCINED
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

GHS-US classification
Carc. 1A H350
STOT RE 1 H372
Full text of H statements: see section 16

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US):

Signal word (GHS-US): Danger
Hazard statements (GHS-US): H350 - May cause cancer
H372 - Causes damage to organs through prolonged or repeated exposure
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
P260 - Do not breathe dust
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
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. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available
DIATOMACEOUS EARTH, calcined
Safety Data Sheet

SECTION 3: Composition/Information on ingredients

3.1. Substance

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Multi-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>DIATOMACEOUS EARTH, calcined</td>
</tr>
<tr>
<td>CAS No</td>
<td>68855-54-9</td>
</tr>
<tr>
<td>EC no</td>
<td>272-489-0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diatomaceous earth, calcined</td>
<td>(CAS No) 68855-54-9</td>
<td>90-100</td>
<td>Not classified</td>
</tr>
<tr>
<td>Cristobalite silica</td>
<td>(CAS No) 14464-46-1</td>
<td>0-10</td>
<td>Carc. 1A, H350 STOT RE 1, H372</td>
</tr>
</tbody>
</table>

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.

First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

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, both acute and delayed

Symptoms/injuries: Causes damage to organs through prolonged or repeated exposure. May cause cancer.

Symptoms/injuries after inhalation: May cause irritation to the respiratory tract. Exposure to respirable silica can cause silicosis, a fibrosis (scarring) of the lungs.

Symptoms/injuries after skin contact: May cause skin irritation. There is evidence that silica can exacerbate scleroderma, an immune disorder of the skin.

Symptoms/injuries after eye contact: May cause eye irritation. May cause abrasion of cornea.

Symptoms/injuries after ingestion: May be harmful if swallowed.

Chronic symptoms: Silicosis can occur after many years of exposure to relatively low levels of airborne respirable silica. IARC has concluded that there was sufficient evidence of the carcinogenicity of respirable crystalline silica to experimental animals, and that carcinogenicity of respirable silica to humans is anticipated.

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.

5.3. Advice for firefighters

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”. 

06/22/2016 EN (English US) SDS ID: SID2754.2 2/7
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 particulate silica 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. Do not breathe dust. Avoid dust formation. 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
Storage conditions
- Keep container tightly closed. Store locked up.
Incompatible materials
- None known.
Storage area
- Store in a well-ventilated place.

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Cristobalite silica (14464-46-1)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH ACGIH TWA (mg/m³)</td>
<td>0.05 mg/m³</td>
</tr>
<tr>
<td>USA OSHA OSHA PEL (TWA) (mg/m³)</td>
<td>0.05 mg/m³</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls
- Provide local exhaust or general room ventilation.
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.
- Neoprene or nitrile rubber gloves.
- Chemical goggles. Contact lenses should not be worn.
- Wear suitable protective clothing.
- 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>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>No data available</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>1610 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>2230 °C</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>
</tbody>
</table>
DIATOMACEOUS EARTH, calcined
Safety Data Sheet

**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**: 2.3
**VOC content**: 0 %
**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**

<table>
<thead>
<tr>
<th><strong>Acute toxicity</strong></th>
<th>: Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diatomaceous earth, calcined (68855-54-9)</strong></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>: Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>: Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>: Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>: Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>: May cause cancer.</td>
</tr>
</tbody>
</table>

| **Diatomaceous earth, calcined (68855-54-9)** | |
| IARC group | 3 - Not classifiable |

| **Cristobalite silica (14464-46-1)** | |
| IARC group | 1 - Carcinogenic to humans |

| **Reproductive toxicity** | : Not classified |
| **Specific target organ toxicity (single exposure)** | : Not classified |
| **Specific target organ toxicity (repeated exposure)** | Causes damage to organs through prolonged or repeated exposure. |

| **Aspiration hazard** | : Not classified |
| **Symptoms/injuries after inhalation** | May cause irritation to the respiratory tract. Exposure to respirable silica can cause silicosis, a fibrosis (scarring) of the lungs. |
| **Symptoms/injuries after skin contact** | May cause skin irritation. There is evidence that silica can exacerbate scleroderma, an immune disorder of the skin. |
| **Symptoms/injuries after eye contact** | May cause eye irritation. May cause abrasion of cornea. |
| **Symptoms/injuries after ingestion** | May be harmful if swallowed. |
Chronic symptoms: Silicosis can occur after many years of exposure to relatively low levels of airborne respirable silica. IARC has concluded that there was sufficient evidence of the carcinogenicity of respirable crystalline silica to experimental animals, and that carcinogenicity of respirable silica to humans is anticipated.

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Diatomaceous earth, calcined (68855-54-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
</tr>
<tr>
<td>(no known bioaccumulation)</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects

| Effect on ozone layer | : No additional information available |
| Effect on the global warming | : No known effects from 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

<table>
<thead>
<tr>
<th>DIATOMACEOUS EARTH, calcined (68855-54-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA Exemption/Exclusion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diatomaceous earth, calcined (68855-54-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cristobalite silica (14464-46-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

15.2. International regulations
# Diatomaceous Earth, Calcined

## Safety Data Sheet

### Diatomaceous Earth, Calcined (68855-54-9)
- 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 EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on the Canadian IDL (Ingredient Disclosure List)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)
- Listed on CICR (Turkish Inventory and Control of Chemicals)

### Cristobalite Silica (14464-46-1)
- 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 EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)

## 15.3. US State Regulations

### Diatomaceous Earth, Calcined (68855-54-9)

<table>
<thead>
<tr>
<th>State</th>
<th>Proposition 65 - Carcinogens List</th>
<th>Proposition 65 - Developmental Toxicity</th>
<th>Proposition 65 - Reproductive Toxicity - Female</th>
<th>Proposition 65 - Reproductive Toxicity - Male</th>
<th>Non-significant risk level (NSRL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Cristobalite Silica (14464-46-1)

<table>
<thead>
<tr>
<th>State</th>
<th>Proposition 65 - Carcinogens List</th>
<th>Proposition 65 - Developmental Toxicity</th>
<th>Proposition 65 - Reproductive Toxicity - Female</th>
<th>Proposition 65 - Reproductive Toxicity - Male</th>
<th>Non-significant risk level (NSRL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Diatomaceous Earth, Calcined (68855-54-9)

- U.S. - Pennsylvania - RTK (Right to Know) List

### Cristobalite Silica (14464-46-1)

- U.S. - New Jersey - Right to Know Hazardous Substance List

## 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.

### Full text of H-phrases:
- H350: May cause cancer
- H372: Causes damage to organs through prolonged or repeated exposure
HMS III Rating

Health: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability: 0 Minimal Hazard
Physical: 0 Minimal Hazard

Prepared by safety and environmental affairs.

Date of issue: 06/22/2016 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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