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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product form</td>
<td>Substance</td>
</tr>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Substance name</td>
<td>PYROPHYLLITE</td>
</tr>
<tr>
<td>Product code</td>
<td>SIP6943.0</td>
</tr>
<tr>
<td>Formula</td>
<td>Al2(Si4O10)(OH)2</td>
</tr>
<tr>
<td>Synonyms</td>
<td>POTASSIUM ALUMINOSILICATE; HYDRATED ALUMINUM SILICATE</td>
</tr>
<tr>
<td>Chemical family</td>
<td>INORGANIC SILICATE</td>
</tr>
</tbody>
</table>

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture: Chemical intermediate

1.2.2. Uses advised against

No additional information available

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

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.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 according to Regulation (EC) No. 1272/2008 [CLP]
Not classified

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
EUH-statements: EUH210 - Safety data sheet available on request.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance type</td>
<td>Multi-constituent</td>
</tr>
<tr>
<td>Name</td>
<td>PYROPHYLLITE</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>12269-78-2</td>
</tr>
</tbody>
</table>
**Name** | **Product identifier** | **%** | **Classification according to Regulation (EC) No. 1272/2008 [CLP]**
---|---|---|---
Pyrophyllite | (CAS-No.) 12269-78-2 (EC-No.) 602-803-7 | 50 - 55 | Not classified
Silica (quartz) | (CAS-No.) 14808-60-7 | 35 - 45 | Carc. 1A, H350 STOT RE 1, H372
Kaolin, uncalcined | (CAS-No.) 1332-58-7 (EC-No.) 310-194-1 | 2 - 10 | Not classified

Full text of 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 person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

- **First-aid measures after skin contact**: Wash with plenty of 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/effects after inhalation**: May cause irritation to the respiratory tract. Respirable fractions of quartz in this product are no more than 1% and the crystalline fraction is much smaller.

- **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.

**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.

**SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

- **For non-emergency personnel**
  - **Protective equipment**: Wear protective equipment as described in Section 8.
  - **Emergency procedures**: Evacuate unnecessary personnel.

- **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
Precautions for safe handling: 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.
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>Silica (quartz) (14808-60-7)</th>
<th>Control parameter</th>
<th>ACGIH TWA (mg/m³)</th>
<th>USA IDLH (mg/m³)</th>
<th>USA NIOSH NIOSH REL (TWA) (mg/m³)</th>
<th>USA OSHA OSHA PEL (TWA) (mg/m³)</th>
<th>US IDLH (mg/m³)</th>
<th>Italy - Portugal - USA ACGIH ACGIH TWA (mg/m³)</th>
<th>Limit value (mg/m³)</th>
<th>Limit value (mg/m³)</th>
<th>Limit value (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>ACGIH TWA</td>
<td>0.025</td>
<td>50</td>
<td>0.05</td>
<td>10 mg/m³ respirable; 15 mg/m³ (nuisance dust)</td>
<td>2 mg/m³ (alveolar fraction)</td>
<td>3 mg/m³ (particulate matter containing no asbestos and &lt;1% crystalline silica, respirable fraction)</td>
<td>6 mg/m³ (containing &lt;2% free Crystalline silicon dioxide in respirable fraction-inhalable fraction)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (TWA)</td>
<td>10 mg/m³ (total dust)</td>
<td>5 mg/m³ (respirable fraction)</td>
<td>2 mg/m³ (total dust)</td>
<td>15 mg/m³ (total dust)</td>
<td>5 mg/m³ (respirable fraction)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>VME</td>
<td>10 mg/m³</td>
<td>3 mg/m³ (respirable dust)</td>
<td>2 mg/m³ (respirable dust)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>WEL TWA</td>
<td>6 mg/m³ (calculated-respirable dust)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>WEL STEL</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>Graعnseværde (langvarig)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>HTP-arvo (8h)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (8 hours ref)</td>
<td>2 mg/m³ (respirable dust)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>NDS</td>
<td>10 mg/m³ (&gt;2% free crystalline silica and containing no asbestos-inhalable fraction)</td>
<td>2 mg/m³ (total aerosol)</td>
<td>2 mg/m³ (total aerosol)</td>
<td>2 mg/m³ (total aerosol)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slovakia</td>
<td>NPHV</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (respirable)</td>
<td>2 mg/m³ (total aerosol)</td>
<td>2 mg/m³ (total aerosol)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada (Quebec)</td>
<td>VEMP</td>
<td>5 mg/m³ (containing no Asbestos and &lt;1% Crystalline silica-respirable dust)</td>
<td>10 mg/m³ (containing no asbestos and &lt;1% Crystalline silica-inhalable dust)</td>
<td>10 mg/m³ (containing no asbestos and &lt;1% Crystalline silica-inhalable dust)</td>
<td>10 mg/m³ (containing no asbestos and &lt;1% Crystalline silica-inhalable dust)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>TWA</td>
<td>10 mg/m³ (containing no asbestos and &lt;1% Crystalline silica-inhalable dust)</td>
<td>10 mg/m³ (containing no asbestos and &lt;1% Crystalline silica-inhalable dust)</td>
<td>10 mg/m³ (containing no asbestos and &lt;1% Crystalline silica-inhalable dust)</td>
<td>10 mg/m³ (containing no asbestos and &lt;1% Crystalline silica-inhalable dust)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td>OEL TWA</td>
<td>2 mg/m³ (respirable fraction, particulate matter containing no Asbestos and &lt;1% Crystalline silica)</td>
<td>2 mg/m³ (respirable fraction, particulate matter containing no Asbestos and &lt;1% Crystalline silica)</td>
<td>2 mg/m³ (respirable fraction, particulate matter containing no Asbestos and &lt;1% Crystalline silica)</td>
<td>2 mg/m³ (respirable fraction, particulate matter containing no Asbestos and &lt;1% Crystalline silica)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td>OEL chemical category (PT)</td>
<td>A4 - Not Classifiable as a Human Carcinogen</td>
<td>A4 - Not Classifiable as a Human Carcinogen</td>
<td>A4 - Not Classifiable as a Human Carcinogen</td>
<td>A4 - Not Classifiable as a Human Carcinogen</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Print date: 11/04/2019  
EN (English)  
SDS ID: SIP6943.0  
3/8
### 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.

**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>360.31 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Cream.</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.54</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>&gt; 600 °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>Not combustible</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>&lt; 0.01 mm Hg @ 20°C</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>2.84</td>
</tr>
<tr>
<td>Density</td>
<td>Typical bulk density, not compacted: 0.40g/cm3; Particle Size: &lt;24 um</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>100 %</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>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive 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

Kaolin, uncalcined (1332-58-7)

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>14900 mg/kg</td>
</tr>
<tr>
<td>ATE CLP (oral)</td>
<td>14900 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

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

Limited evidence suggests that the crystalline silica component is a human carcinogen.

Silica (quartz) (14808-60-7)

IARC group | 1 - Carcinogenic to humans

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Respirable fractions of quartz in this product are no more than 1% and the crystalline fraction is much smaller.
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.

SECTION 12: Ecological information

12.1. Toxicity
Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

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. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

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

SECTION 14: Transport information

14.1. UN number
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name
Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)
ADR
Transport hazard class(es) (ADR) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

ADN
Transport hazard class(es) (ADN) : Not applicable

RID
Transport hazard class(es) (RID) : Not applicable

14.4. Packing group
Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards
Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user
- Overland transport
No data available

- Transport by sea
No data available

- Air transport
No data available

- Inland waterway transport
No data available

- Rail transport
No data available
SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions
PYROPHYLLITE is not on the REACH Candidate List
PYROPHYLLITE is not on the REACH Annex XIV List
PYROPHYLLITE is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

% Volatiles: 100 %

15.1.2. National regulations

Germany
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV
Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

Netherlands
SZW-lijst van kankerverwekkende stoffen
The substance is not listed

Netherlands
SZW-lijst van mutagene stoffen
The substance is not listed

Netherlands
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding
The substance is not listed

Netherlands
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid
The substance is not listed

Netherlands
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling
The substance is not listed

Denmark
Danish National Regulations
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal.

15.2. Chemical safety assessment

No additional information available

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

Other information: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carc. 1A</td>
<td>Carcinogenicity, Category 1A</td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>Specific target organ toxicity — Repeated exposure, Category 1</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer.</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>EUH210</td>
<td>Safety data sheet available on request.</td>
</tr>
</tbody>
</table>
The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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