



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

1.1. Product identifier

| | |
|-----------------|---|
| Product form | : Substance |
| Physical state | : Solid |
| Substance name | : PYROPHYLLITE |
| Product code | : SIP6943.0 |
| Formula | : $\text{Al}_2(\text{Si}_4\text{O}_{10})(\text{OH})_2$ |
| Synonyms | : POTASSIUM ALUMINOSILICATE; HYDRATED ALUMINUM SILICATE |
| 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

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 | : Multi-constituent |
| Name | : PYROPHYLLITE |
| CAS No | : 12269-78-2 |

| Name | Product identifier | % | GHS-US classification |
|--------------------|---------------------|---------|-----------------------|
| Pyrophyllite | (CAS No) 12269-78-2 | 50 - 55 | Not classified |
| Silica (quartz) | (CAS No) 14808-60-7 | 35 - 45 | Not classified |
| Kaolin, uncalcined | (CAS No) 1332-58-7 | 2 - 10 | Not classified |

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. If you feel unwell, seek medical advice. |

PYROPHYLLITE

Safety Data Sheet

| | |
|---------------------------------------|---|
| 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 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/injuries after skin contact | : May cause skin irritation. |
| Symptoms/injuries after eye contact | : May cause eye irritation. |
| Symptoms/injuries after ingestion | : No information available. |

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". |
|----------------------|--|

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

| Silica (quartz) (14808-60-7) | | |
|------------------------------|--------------------------------|---------------------------------------|
| USA ACGIH | ACGIH TWA (mg/m ³) | 0.1 mg/m ³ respirable dust |

PYROPHYLLITE

Safety Data Sheet

| Silica (quartz) (14808-60-7) | | |
|--------------------------------|--------------------------------------|---|
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 15 mg/m ³ nuisance dust |
| Kaolin, uncalcined (1332-58-7) | | |
| USA ACGIH | ACGIH TWA (mg/m ³) | 2 mg/m ³ (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction) |
| USA NIOSH | NIOSH REL (TWA) (mg/m ³) | 10 mg/m ³ (total dust) 5 mg/m ³ (respirable dust) |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction) |

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

| | |
|---|--|
| Physical state | : Solid |
| Appearance | : Powder. |
| Molecular mass | : 360.31 g/mol |
| Color | : Cream. |
| Odor | : No data available |
| Odor threshold | : No data available |
| Refractive index | : 1.54 |
| pH | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Melting point | : > 600 °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) | : Not combustible |
| Vapor pressure | : < 0.01 mm Hg @ 20°C |
| Relative vapor density at 20 °C | : No data available |
| Relative density | : 2.84 |
| Specific gravity / density | : Typical bulk density, not compacted: 0.40g/cm ³ ; Particle Size: <24 um |
| 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

PYROPHYLLITE

Safety Data Sheet

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)

| | |
|---------------|-----------------------------|
| LD50 oral rat | 14900 mg/kg |
| ATE US (oral) | 14900.000 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

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

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. Respirable fractions of quartz in this product are no more than 1% and the crystalline fraction is much smaller.

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

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

Symptoms/injuries 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 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.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

Not regulated for transport.

PYROPHYLLITE

Safety Data Sheet

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

PYROPHYLLITE (12269-78-2)

TSCA Exemption/Exclusion Exempt-Naturally Occurring Substances in accordance with 40 CFR 710.4(b).

Silica (quartz) (14808-60-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Pyrophyllite (12269-78-2)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Kaolin, uncalcined (1332-58-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

Silica (quartz) (14808-60-7)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
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)

Pyrophyllite (12269-78-2)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on NZIoC (New Zealand Inventory of Chemicals)

Kaolin, uncalcined (1332-58-7)

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 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)
Listed on Turkish inventory of chemical

15.3. US State regulations

PYROPHYLLITE(12269-78-2)

U.S. - California - Proposition 65 - Carcinogens List No

U.S. - California - Proposition 65 - Developmental Toxicity No

U.S. - California - Proposition 65 - Reproductive Toxicity - Female No

U.S. - California - Proposition 65 - Reproductive Toxicity - Male No

Silica (quartz) (14808-60-7)

| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | Non-significant risk level (NSRL) |
|---|---|---|---|-----------------------------------|
| No | No | No | No | |

PYROPHYLLITE

Safety Data Sheet

| Pyrophyllite (12269-78-2) | | | | |
|---|---|---|---|-----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | Non-significant risk level (NSRL) |
| No | No | No | No | |
| Kaolin, uncalcined (1332-58-7) | | | | |
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | Non-significant risk level (NSRL) |
| No | No | No | No | |
| Kaolin, uncalcined (1332-58-7) | | | | |

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 : 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard

Prepared by safety and environmental affairs.

Date of issue: 01/04/2016 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

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

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.

© 2015 Gelest Inc. Morrisville, PA 19067