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

1.1. Product identifier

Product form: Substance
Physical state: Solid
Substance name: HALLOYSITE
Product code: SIH5840.15
Formula: Al₂Si₂O₅(OH)₄
Synonyms: KAOLINIC MINERAL, ALUMINUM SILICATE
Chemical family: INORGANIC SILICATE

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-Klaatte-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.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type: Multi-constituent
Name: HALLOYSITE
CAS-No.: 1332-58-7
**Name** | **Product identifier** | **%** | **Classification according to Regulation (EC) No. 1272/2008 [CLP]**  
--- | --- | --- | ---  
Kaolin | (CAS-No.) 1332-58-7 (EC-No.) 310-194-1 | 95 - 100 | Not classified  
Cristobalite silica | (CAS-No.) 14464-46-1 (EC-No.) 238-455-4 | 0 - 5 | Carc. 1A, H350 STOT RE 1, H372  
Quartz | (CAS-No.) 14808-60-7 | 0 - 5 | Carc. 1A, H350 STOT RE 1, H372  

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.

**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.

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

<table>
<thead>
<tr>
<th>Preconditions for safe handling</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hygiene measures</td>
<td>Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust.</td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

#### 7.2. Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Storage conditions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Incompatible materials</td>
<td></td>
</tr>
<tr>
<td>Storage area</td>
<td>Keep container tightly closed.</td>
</tr>
<tr>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Store in a well-ventilated place. Store away from heat.</td>
<td></td>
</tr>
</tbody>
</table>

#### 7.3. Specific end use(s)

No additional information available.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<table>
<thead>
<tr>
<th>Kaolin (1332-58-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>Limit value (mg/m³)</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>OEL TWA (mg/m³)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>VME (mg/m³)</td>
</tr>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>VLA-ED (mg/m³)</td>
</tr>
<tr>
<td>Switzerland</td>
<td>MAK (mg/m³)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>WEL TWA (mg/m³)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>WEL STEL (mg/m³)</td>
</tr>
<tr>
<td>Denmark</td>
<td>Gramseværdie (langvarig) (mg/m³)</td>
</tr>
<tr>
<td>Finland</td>
<td>HTP-arvo (8h) (mg/m³)</td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (8 hours ref) (mg/m³)</td>
</tr>
<tr>
<td>Poland</td>
<td>NDS (mg/m³)</td>
</tr>
<tr>
<td>Slovakia</td>
<td>NPHV (priemerná) (mg/m³)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada (Quebec)</td>
<td>VEMP (mg/m³)</td>
</tr>
<tr>
<td>Australia</td>
<td>TWA (mg/m³)</td>
</tr>
<tr>
<td>Portugal</td>
<td>OEL TWA (mg/m³)</td>
</tr>
<tr>
<td>Portugal</td>
<td>OEL chemical category (PT)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Quartz (14808-60-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (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.

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>258.16 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No additional information available</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>2.59</td>
</tr>
<tr>
<td>Density</td>
<td>Bulk Density: 0.75 g/cc</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 (1332-58-7)**
- LD50 oral rat: 14900 mg/kg
- ATE CLP (oral): 14900 mg/kg bodyweight

**Skin corrosion/irritation**: Not classified
**Serious eye damage/irritation**: Not classified
**Respiratory or skin sensitisation**: Not classified
**Germ cell mutagenicity**: Not classified
**Carcinogenicity**
- IARC has concluded that there was sufficient evidence of the carcinogenicity of crystalline silica to experimental animals, but that there was limited evidence of carcinogenicity of crystalline silica to humans.
- Limited evidence suggests that crystalline silica (quartz), a trace component, is a human carcinogen.

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

**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.
**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
  Not applicable
- Transport by sea
  Not applicable
- Air transport
  Not applicable
- Inland waterway transport
Not applicable

- Rail transport
Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

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
HALLOYSITE is not on the REACH Candidate List
HALLOYSITE is not on the REACH Annex XIV List
HALLOYSITE 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
Reference to AwSV : Water hazard class (WGK) nwg, Non-hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 765)

Netherlands
SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed
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

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:

Carc. 1A : Carcinogenicity, Category 1A
STOT RE 1 : Specific target organ toxicity — Repeated exposure, Category 1
H350 : May cause cancer.
H372 : Causes damage to organs through prolonged or repeated exposure.
EUH210 : Safety data sheet available on request.
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