SECTION 1. Identification

1.1. Product identifier

Ulexite

CAS 1319-33-1
Trade name Ulexite
Chemical name/synonyms: Ulexite, Sodium-Calcium Pentaborate Octahydrate, Ground Ulexite

REACH Registration No: Exempt from registration under REACH Regulation according to Article 2 (7) (b). Ulexite is a natural occurring mineral which is not chemically modified, therefore, considered within the scope of Annex V (7) of the REACH Regulation.

1.2. Details of the supplier of the safety data sheet

Supplier name: American Borate Company
Address: 5701 Cleveland Street, Suite 350, Virginia Beach, VA 23462
Phone No: (757) 490-2242 or (800)-486-1072

1.3. Emergency phone numbers:
Monday through Friday 8am – 5pm EST: (757) 490-2242 or (800) 486-1072
After 5pm and weekends: CHEMTREC 1-800-424-9300

1.4. Relevant identified uses of the substance and uses advised against

The product is used in industrial manufacturing, in particular in:
Insulation grade fiberglass    Borosilicate glass

There is no specified use advised against.

SECTION 2. Hazard Identification

2.1. Classification of the substance

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
No classification.

2.2. Label elements

None.

2.3. Other hazards

None.

SECTION 3. Composition/ Information on Ingredients

3.1. Substances:

Chemical Nature of the Substance / Preparation

Ulexite is a mono-constituent substance and the main constituent is Ulexite (Sodium-Calcium Pentaborate Octahydrate).
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Chemical Name</th>
<th>CAS No:</th>
<th>Wt. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ulexite</td>
<td>Sodium-Calcium Pentaborate Octahydrate</td>
<td>1319-33-1</td>
<td>83.90-89.00</td>
</tr>
<tr>
<td>Calcite</td>
<td>Calcium Carbonate</td>
<td>1317-65-3</td>
<td>6.00-10.00</td>
</tr>
<tr>
<td>Dolomite</td>
<td>Calcium Magnesium Carbonate</td>
<td>16389-88-1</td>
<td>1.00-2.00</td>
</tr>
<tr>
<td>Clay</td>
<td>-</td>
<td>-</td>
<td>4.00-6.00</td>
</tr>
</tbody>
</table>

### SECTION 4. First-aid Measures

#### 4.1. Description of first aid measures

**General advice**
Move out of dangerous area. Seek medical attention. Show this safety data sheet to the doctor in attendance.

**Skin contact**
Wash with soap and water. Seek medical attention.

**Eye contact**
As with any chemical exposure to the eye, flush eyes with water for at least 20-minutes. Seek medical attention.

**Inhalation**
If symptoms such as nose or throat irritation are observed, remove person to fresh air. If not breathing, give artificial respiration. Seek medical attention.

**Ingestion**
If large amounts are swallowed (i.e. more than one teaspoon), give two glasses of water or milk to drink and seek medical attention. Never give anything by mouth to an unconscious person.

**Notes for the doctor**
Treat symptomatically.

### SECTION 5. Fire-fighting Measures Identification

#### 5.1. Suitable extinguishing media
Use fire extinguishing media suitable for surrounding fires.

#### 5.2. Specific hazards arising from the chemical
None, Ulexite is non-flammable, combustible or explosive. The product is itself a flame retardant.

#### 5.3. Special protective actions for fire-fighters
Firefighters should wear pressure demand, self-contained breathing apparatus and full turn-out gear.

### SECTION 6. Accidental Release Measures

#### 6.1. Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Avoid breathing dust. In case of exposure to prolonged or high level of airborne dust, wear a personal respirator in compliance with national legislation.

#### 6.2. Environmental precautions
Ulexite is somewhat water-soluble and may, at high concentrations cause damage to trees or vegetation by root absorption (see section 12). Do not flush to drains.

#### 6.3. Methods and materials for containment and cleaning up

**Land spill**
Vacuum, shovel or sweep up ulexite and place in containers for disposal in accordance with applicable local, state, and federal laws and regulations. Avoid contamination of water bodies during clean up and disposal. Avoid breathing dust.
Spillage into water
Where possible, remove any intact containers from the water. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its normal environmental background level (see sections 12, 13 and 15).

6.4. Reference to other sections
See sections 8 and 13 for further information.

SECTION 7. Handling and Storage

7.1. Precautions for safe handling
To maintain package integrity and to minimize caking of the product, bags should be handled on a first-in first out basis. Good housekeeping and dust prevention procedures should be followed to minimize dust generation and accumulation. Use with appropriate local exhaust ventilation. The product should be kept away from strong reducing agents. Apply above handling advice when mixing with other substances.

7.2. Conditions for safe storage
Keep containers closed and store indoors in a dry well ventilated location. Provide appropriate ventilation and store bags such as to prevent any accidental damage.

7.3. Specific end use
See section 1.4.

SECTION 8. Exposure Controls/Personal Protection

8.1. Control parameters
Occupational exposure limits;
OSHA-PEL*: 15 mg/m³ total dust
5 mg/m³ respirable dust
Cal OSHA-PEL*: 10 mg/m³
Biological limit values;
Currently, there is no Biological Limit Value (BLV) determined for this substance.
*OSHA PELs are based on an 8-hour time weighted average (TWA) exposure. For the equivalent limits in other countries, please consult the local regulatory authority.

8.2. Exposure controls

8.2.1. Appropriate engineering controls
Provide general or local exhaust ventilation systems to maintain airborne concentrations of ulexite dust below specific exposure limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

8.2.2. Individual protection measures, such as personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eyes and hand protection
Handle with gloves. Wear eye protection suitable for job tasks.

8.2.3. Environmental exposure controls
No special requirements (See section 6).
## 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>Appearance</td>
<td>light grey, ground powder</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point: Evaporation rate</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Low solubility</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-Ignition temperature</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Dehydration begins @105°C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosion properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### 9.2. Other information

Bulk density: 62.43 lbs/ft³ (1 ton/m³ max)

## SECTION 10. Stability and Reactivity

### 10.1. Reactivity

Ulexite is a stable product, but when heated it can dehydrate.

### 10.2. Chemical stability

Ulexite is stable at room temperature under normal storage and handling conditions.

### 10.3. Possibility of hazardous reactions

No known hazardous reactions.

### 10.4. Conditions to avoid

Avoid excessive heat, direct sunlight, generating dust, moisture, static discharges and high temperatures (See section 7).

### 10.5. Incompatible materials

Incompatible with oxidizing agents, acids, reducing agents and sources of ignition. Reaction with strong reducing agents such as metal hydrides will generate hydrogen gas which could create an explosive hazard.

### 10.6. Hazardous decomposition products

No known hazardous decomposition products.

## SECTION 11. Toxicological Information

### 11.1. Information on toxicological effects

Ulexite does not meet the criteria for classification as hazardous according to 29 CFR 1910. Exempt from REACH registration in accordance with Annex V.7. A hazard assessment has been conducted by “Harlan Laboratories” and the outcome was that Ulexite is not a hazardous substance.

- **Acute toxicity**
  - Oral: No data available.
  - Dermal: No data available.
Inhalation
Classification for acute toxicity is not warranted. No data available.

Skin corrosion /irritation
Classification for irritation/corrosion is not warranted. No data available.

Serious eye damage /irritation
Classification is not warranted. No data available.

Respiratory or skin sensitization
Ulexite is not considered to be a skin sensitizer based on experience in handling and low absorption through the skin. Classification for sensitization is not warranted.

Mutagenicity
- in-vitro Mutagenicity
- In-vivo Mutagenicity
- Germ cell mutagenicity
Classification for mutagenicity is not warranted

Carcinogenicity
Classification for carcinogenicity is not warranted.

Reproductive toxicity
- Fertility
- Developmental toxicity
Classification for reproductive toxicity is not warranted

STOT – single exposure
Classification for specific target organ toxicity is not warranted. No data available.

STOT – repeated exposure
Classification for specific target organ toxicity is not warranted. No data available.

Aspiration hazard
Based on available data, the classification criteria are not met.

SECTION 12. Ecological Information

No data is available for Ulexite. Therefore ecotoxicity data of boron are provided.

12.1. Toxicity

Phytotoxicity: Although boron is an essential micronutrient for healthy growth of plants, it can be harmful to boron-sensitive plants in higher quantities. Care should be taken to minimize the amount of ulexite released to the environment.

Fish Toxicity:
- Rainbow Trout (S. gairdneri)
  24 day LC50 = 150.0 mg/B/L
  36 day NOEC-LOEC = 0.75-1 mg/B/L
- Goldfish (Carassius auratus)
  3 Day LC50 = 178 mg B/L
  7 day NOEC = 26.50 mg/B/L

Invertebrate toxicity:
The acute toxicity (LC50) to *Daphnia magna* Straus in natural water is reported to be 133 mg B/L (48 h). Chronic toxicity (21-day NOEC-LOEC) is reported to be 6-13 mg B/L.

12.2. Persistence and degradability
Boron is naturally occurring and ubiquitous in the environment.

12.3. Bioaccumulative potential
Boron is a naturally occurring element. Boron does not accumulate up the food chain. It is not expected to bioconcentrate in fish.

12.4. Mobility in soil
Ulexite is poorly soluble in water and will leach through the soil at very slow rate.
12.5. Results of PBT and vPvB assessment
According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6. Other adverse effects:
No specific adverse effects known.

SECTION 13. Disposal Considerations

13.1. Disposal methods
Dispose of in accordance with all local, state, and federal regulations. Contact a licensed waste disposal service to dispose of this material. Surplus product should, if possible, be used for an appropriate application.

SECTION 14. Transport Information

US DOT
Not dangerous goods
IMDG
Not dangerous goods
IATA
Not dangerous goods

SECTION 15. Regulatory Information

15.1. Safety health and environmental regulations/legislation specific for the substance:
Ulexite is a naturally occurring mineral.

15.2. Chemical Safety Assessment:
Exempt from REACH registration in accordance with Annex V.7. A hazard assessment has been conducted by “Harlan Laboratories Ltd.” and the outcome was that ulexite is not a hazardous substance

REACH Registration No: Exempt from registration under REACH Regulation according to Article 2(7)(b). Ulexite is a natural occurring mineral which is not chemically modified, therefore, considered within the scope of Annex V (7) of the REACH Regulation.

SECTION 16. Other Information

Data are based on our latest knowledge but do not constitute a guarantee for any specific product features and do not establish a legally valid contractual relationship.

Key literature references and sources for data:

1. ECOTOX: http://www.epa.gov/ecotox

16.4. Disclaimer of liability
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