SECTION 1: Identification

1.1. GHS Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade name</td>
<td>ETİKOLEMANİT (Bigadic Ground Colemanite)</td>
</tr>
<tr>
<td>Chemical name</td>
<td>Calcium borate, dicalcium hexaborate pentahydrate</td>
</tr>
<tr>
<td>Substance type</td>
<td>Mono-constituent</td>
</tr>
<tr>
<td>EC-No.</td>
<td>817-854-2</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>1318-33-8</td>
</tr>
<tr>
<td>Product group</td>
<td>Trade product</td>
</tr>
</tbody>
</table>

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended uses and restrictions: Not restricted

Recommended use:
- Boron alloys
- Borosilicate glass
- Agriculture (Fertilizer, Formulation of fertilizer)
- Fiberglass
- Flux agents for casting

1.4. Supplier’s details

Supplier

ETİ MADEN İŞLETMELERİ GENEL MÜDÜRLÜĞÜ
Kızılirmak Mahallesi 1443, Cadde No:5
Çukurambar-Çankaya Zipcode: 06530
Ankara – TÜRKİYE
Tel: +90 312 294 20 00 – Fax: +90 312 230 71 84
info@etimaden.gov.tr www.etimaden.gov.tr

Importer

ETIMINE USA, INC.
411 Hackensack Ave Suite 902
Hackensack, NJ 07601 USA
Tel: +1 (201) 462-1200; Fax: +1 (201) 462-1500
etimineusa@etimineusa.com www.etimineusa.com

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS
Not classified

Adverse physicochemical, human health and environmental effects: To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS
Hazard pictograms (GHS UN):

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification: Colemanite is an inorganic substance and does not meet the criteria for PBT or vPvB substance.

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Mono-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>Calcium borate, dicalcium hexaborate pentahydrate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to the United Nations GHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colemanite</td>
<td>(CAS-No.) 1318-33-8</td>
<td>78 – 80</td>
<td>Not classified</td>
</tr>
<tr>
<td>Calcite</td>
<td>(CAS-No.) 1317-65-3</td>
<td>8 – 12</td>
<td>Not classified</td>
</tr>
<tr>
<td>Clay</td>
<td></td>
<td>6 – 8</td>
<td>Not classified</td>
</tr>
<tr>
<td>Dolomite</td>
<td>(CAS-No.) 16389-88-1</td>
<td>2 – 3</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
SECTION 4: First-aid measures
4.1. Description of necessary first-aid measures
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Wash skin with plenty of water.
First-aid measures after eye contact: Rinse eyes with water as a precaution.
First-aid measures after ingestion: Call a poison center or a doctor if you feel unwell.
4.2. Most important symptoms/effects, acute and delayed
No additional information available
4.3. Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically.

SECTION 5: Fire-fighting measures
5.1. Suitable extinguishing media
5.2. Specific hazards arising from the chemical
Hazardous decomposition products in case of fire: Toxic fumes may be released.
5.3. Special protective actions for fire-fighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Emergency procedures: Ventilate spillage area.
6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
6.2. Environmental precautions
Avoid release to the environment.
6.3. Methods and materials for containment and cleaning up
Methods for cleaning up: Mechanically recover the product.
Other information: Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
No additional information available
8.2. Appropriate engineering controls
Appropriate engineering controls: Ensure good ventilation of the work station.
Environmental exposure controls: Avoid release to the environment.
8.3. Individual protection measures, such as personal protective equipment (PPE)
Hand protection: Protective gloves
Eye protection: Safety glasses
Skin and body protection: Wear suitable protective clothing
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment
Personal protective equipment symbol(s)
8.4. Exposure limit values for the other components
No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Light grey.</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</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>Flammability (solid, gas)</td>
<td>Non flammable</td>
</tr>
</tbody>
</table>

Explosive limits:
- Not applicable

Lower explosive limit (LEL):
- Not applicable

Upper explosive limit (UEL):
- Not applicable

Flash point:
- Not applicable

Auto-ignition temperature:
- Non flammable

Decomposition temperature:
- When heated above 105°C it loses its hydrate water

pH:
- Not applicable

pH solution:
- Not available

Viscosity, kinematic (calculated value) (40°C):
- Not applicable

Partition coefficient n-octanol/water (Log Pow):
- Not available

Partition coefficient n-octanol/water (Log Kow):
- Not available

Vapour pressure:
- Not applicable

Vapour pressure at 50°C:
- Not applicable

Density:
- No data available

Relative density:
- Not available

Relative vapour density at 20°C:
- Not applicable

Solubility:
- Water: Low solubility

Particle size:
- Not available

Particle size distribution:
- Not available

Particle shape:
- Not available

Particle aspect ratio:
- Not available

Particle specific surface area:
- Not available

9.2. Data relevant with regard to physical hazard classes (supplemental)

Bulk density:
- 1 ton/m³

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).
10.5. **Incompatible materials**
No additional information available

10.6. **Hazardous decomposition products**
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

- **Acute toxicity (oral)**: Not classified
- **Acute toxicity (dermal)**: Not classified
- **Acute toxicity (inhalation)**: Not classified
- **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
- **Respiratory or skin sensitisation**: Not classified
- **STOT-single exposure**: Not classified
- **STOT-repeated exposure**: Not classified
- **Aspiration hazard**: Not classified

**ETIKOLEMANİT** (Bigadic Ground Colemanite) (1318-33-8)

**Viscosity, kinematic**
Not applicable

### SECTION 12: Ecological information

#### 12.1. Toxicity

- **Ecology - general**: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
- **Hazardous to the aquatic environment, short-term (acute)**: Not classified
- **Hazardous to the aquatic environment, long-term (chronic)**: Not classified

**ETIKOLEMANİT** (Bigadic Ground Colemanite) (1318-33-8)

**Persistence and degradability**

**ETIKOLEMANİT** (Bigadic Ground Colemanite) (1318-33-8)

**Bioaccumulative potential**

**ETIKOLEMANİT** (Bigadic Ground Colemanite) (1318-33-8)

**Mobility in soil**

**ETIKOLEMANİT** (Bigadic Ground Colemanite) (1318-33-8)

**Ozone**: Not classified

**Other adverse effects**: No additional information available

**Other adverse effects**: No additional information available
SECTION 13: Disposal considerations

13.1. Disposal methods
Waste treatment methods: Dispose of contents/container in accordance with licensed collector’s sorting instructions.

SECTION 14: Transport information

In accordance with IMDG / IATA / UN RTDG

<table>
<thead>
<tr>
<th>UN RTDG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>Not regulated for transport</td>
<td></td>
</tr>
<tr>
<td>14.2. UN Proper Shipping Name</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Dangerous for the environment: No</td>
<td>Marine pollutant: No</td>
</tr>
<tr>
<td></td>
<td>No supplementary information available</td>
<td></td>
</tr>
</tbody>
</table>

14.6. Special precautions for user
- UN RTDG
  - No data available
- IMDG
  - No data available
- IATA
  - No data available

14.7. Transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question
Regulatory reference:
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on the Canadian NDSL (Non-Domestic Substances List)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- Listed on KECL/KECI (Korean Existing Chemicals Inventory)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances).

SECTION 16: Other information

Issue date: 01/03/2007
Revision date: 03/01/2021

<table>
<thead>
<tr>
<th>Section</th>
<th>Changed item</th>
<th>Change</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Added</td>
<td>This SDS was updated in accordance with the GHS (Rev.6) (2015)-Guidance on the Compilation of Safety data Sheets. This SDS was updated in line with Eti Maden Corporate identity. (January, 2016; Rev. No:04)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Added</td>
<td>This SDS was updated in line with;</td>
</tr>
</tbody>
</table>
COLEMANITE
Safety Data Sheet
according to the United Nations GHS (Rev. 7, 2017)

“Standardization and Simplification of Bag Printings”.
CAS registry system to include CAS number of 1318-33-8. (January, 2018; Rev. No:05)

Added
This SDS was updated to include ‘Fertilizer and Formulation of Fertilizer’ uses under Section 1.2. (February, 2019; Rev. No: 05.1)

Abbreviations and acronyms:
- CAS-No. - Chemical Abstract Service number
- ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE - Acute Toxicity Estimate
- BCF - Bioconcentration factor
- BLV - Biological limit value
- BOD - Biochemical oxygen demand (BOD)
- CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
- COD - Chemical oxygen demand (COD)
- DMEL - Derived Minimal Effect level
- DNEL - Derived-No Effect Level
- EC50 - Median effective concentration
- EC-No.: - European Community number
- EN - European Standard
- IMDG - International Maritime Dangerous Goods
- IATA - International Air Transport Association
- IARC - International Agency for Research on Cancer
- IOELV - Indicative Occupational Exposure Limit Value
- LC50 - Median lethal concentration
- LDS0 - Median lethal dose
- LOAEL - Lowest Observed Adverse Effect Level
- N.O.S. - Not Otherwise Specified
- NOAEC - No-Observed Adverse Effect Concentration
- NOAEL - No-Observed Adverse Effect Level
- NOEC - No-Observed Effect Concentration
- OECD - Organisation for Economic Co-operation and Development
- OEL - Occupational Exposure Limit
- PBT - Persistent Bioaccumulative Toxic
- PNEC - Predicted No-Effect Concentration
- RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
- SDS - Safety Data Sheet
- STP - Sewage treatment plant
- ThOD - Theoretical oxygen demand (ThOD)
- TLM - Median Tolerance Limit
- TRGS - Technical Rules for Hazardous Substances
- VOC - Volatile Organic Compounds
- vPvB - Very Persistent and Very Bioaccumulative
- WGK - Water Hazard Class

Training advice:
Normal use of this product shall imply use in accordance with the instructions on the packaging.

Other information:
DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.