

## 1. COMPANY DETAILS

Company: Steinbock Minerals Ltd.  
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Switzerland  
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## 2. IDENTIFICATION

Product Name: GRAY CHEMICAL GRADE BARYTES  
Mineral Name: BARYTE

## 3. COMPOSITION/INFORMATION ON THE COMPONENTS

### Composition

Chemical Name: Barium Sulphate, BaSO<sub>4</sub>  
CAS# 7727437  
MSDS C.A.S. Code 0440  
Concentration of BaSO<sub>4</sub>: Greater than 96%.  
Specific Gravity 4.35.  
Hazardous identification Information: There are no minor components that are not part of the make-up matrix of these products. The products are sold in sizes of 0-2mm and 0-50mm.

### Chemical Composition

| Component/Chemistry                             | C.A.S.     | %        |
|---|------------|----------|
| Barium Sulphate, BaSO <sub>4</sub>              | 7777-43-7  | 96.02    |
| Strontium Sulphate, SrSO <sub>4</sub>           | 7759-02-6  | 0.15     |
| Iron oxide                                      | 1309-37-1  | 0.25     |
| Silica oxide, SiO <sub>2</sub>                  | 60676-86-0 | 1.76     |
| Aluminium oxide, Al <sub>2</sub> O <sub>3</sub> | 1244-28-1  | 0.18     |
| Calcium oxide                                   | 1305-78-8  | 0.10     |
| Loss on ignition, LOI                           |            | 0.42     |
| Cadmium (ppm)                                   | 7440-43-9  | 1.32 ppm |
| Mercury (ppm)                                   | 7439-97-6  | 0.23 ppm |
| Lead (ppm)                                      | 7439-92-1  | 8 ppm    |

## 4. HAZARD IDENTIFICATION

Routes of Entry: INHALATION-EYE CONTACT-SKIN CONTACT-INGESTION  
Carcinogenic Status: NONE  
Target Organs: EYE-LUNG

#### Health Effect

- Eyes: Direct contact with dust may cause mechanical irritation of the eyes.
- Skin: Direct contact may cause slight dryness, or may cause mild irritation  
Health Effects-Ingestion: Baryte is considered to be relatively non-toxic due to non absorption.
- Inhalation: Inhalation of fine barite dust may cause irritation of the nose and throat by mechanical action.

Other Health Warnings: N/A.

### 5. FIRST AID MEASURES

First Aid-Eyes: Wash eyes with large amounts of water or normal saline solution. If irritation or redness develops, seek medical attention.

First Aid-Skin: Apply common skin moisturizers to relieve dryness. Irritations are uncommon; however, if irritation or redness develops, seek medical attention. Broken skin can be cleansed with mild soap and water.

First Aid-Ingestion: Baryte is considered to be relatively non-toxic due to non absorption.

First Aid-Inhalation: Remove from exposure to fresh air. If breathing has stopped, perform artificial respiration and get medical attention immediately. Keep person warm and at rest. Treat symptomatically and supportively.

Emergency Eye Wash: When there is a possibility that an employees eyes may be exposed to bulk quantities or high concentrations of airborne dust of this substance, the employer should provide an eye wash fountain within the immediate work for emergency.

### 6. FIRE FIGHTING MEASURES

Extinguishing Media: Not readily combustible. Select extinguishing agent appropriate to other materials involved.

Special Hazards of Product: Avoid the formation of dust clouds.

Protective Equipment for Fire-fighting: No specific measures necessary.

### 7. ACCIDENTAL RELEASE MEASURES

Spill Procedures: No specific measure necessary

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards: OSHA TWA (respirable dust) -5 mg/m<sup>3</sup>; ACGIH OSHA TWA(total dust) -10 mg/m<sup>3</sup>

Engineering Control Measures: Engineering methods to prevent or control exposure are preferred. If they are not effective, then suitable personal protective equipment should be used.

Respiratory Protection: The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

Hand Protection: Protective gloves are not required but may be worn to prevent skin dryness or irritation due to skin allergy.

Eye Protection: Dust tight goggles.

Body Protection: Normal work wear.

Emergency Eye Wash: When there is a possibility that an employees eyes may be exposed to bulk quantities or high concentrations of airborne dust of this substance, the employer should provide an eye wash fountain within the immediate work for emergency.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N/A

Melting Point: N/A

Evaporation Rate: N/A

Vapor Pressure(mm Hg): N/A

Vapor Density(Air=1): N/A

Solubility in water: Insoluble

Appearance and Odour: White to tan colored powder; odorless

Other Information Hardness: 2.5-3.5 MOHS

## 10. STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures.

Incompatibility: With powdered aluminum, violently explosive; with phosphorus(primed with potassium nitrate-calcium silicide), ignites.

Decomposition/By Products: Thermal decomposition products may include toxic and hazardous oxides of sulfur and barium.

Hazardous Polymerization: Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

#### 11. ECOLOGICAL INFORMATION

Mobility: The product is insoluble in water.

Persistence/Degradability: No relevant studies identified.

Bio-Accumulation: No relevant studies identified.

Ecotoxicity: No relevant studies identified.

#### 12. DISPOSAL

Product Disposal Dispose of in accordance with all applicable local and national regulations.

#### 13. TRANSPORT INFORMATION

This substance is not regulated as a hazardous material by DOT.

#### 14. OTHER INFORMATION

The information above is believed to be accurate and represents the information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes. In no way shall Steinbock Minerals be liable for any claims, losses or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Steinbock Minerals has been advised of the possibility of such damages.

Steinbock Minerals Ltd.