


SAFETY DATA SHEET

## Section 1: IDENTIFICATION

<b>Product Name:</b>	Barite
<b>Other Means of Identification:</b>	Barium sulphate
<b>Recommended Use:</b>	Drilling fluid additive
<b>Restrictions on Use:</b>	Users should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.
<b>Manufacturer/Supplier:</b>	Bri-Chem Supply Ltd. 27075 Acheson Road Acheson, AB T7X 6B1
<b>Phone Number:</b>	780-962-9490
<b>24 Hour Emergency:</b>	ChemTrec 1-800-424-9300 24/7

## Section 2: HAZARD(S) IDENTIFICATION

<b>Physical Hazards:</b>	Not classified
<b>Health Hazard</b>	Carcinogenicity: Category 1A Specific target organ toxicity following repeated exposure: Category 1
<b>Label Elements:</b>	
<b>Signal Word:</b>	Danger
<b>Hazard Statement:</b>	May cause cancer. Causes damage to organs through prolonged or repeated exposure.
<b>Precautionary Statement</b>	
<b>Prevention:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response:</b>	If exposed or concerned: Get medical advice/attention.
<b>Storage:</b>	Store locked up
<b>Disposal:</b>	Dispose of contents/container in accordance with local / regional / national / international regulations.

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**Other Hazards:** None known

**Supplemental Information:** 100 % of the mixture consists of component(s) of unknown acute oral toxicity  
100 % of the mixture consists of component(s) of unknown acute dermal toxicity  
100 % of the mixture consists of component(s) of unknown acute inhalation toxicity

**Section 3: COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS No.	%	Other Identifiers
Barium Sulphate	7727-43-7	83 – 100	
Crystalline Silica	14808-60-7	1 - <13	

**Section 4: FIRST-AID MEASURES**

**Inhalation:** Move to fresh air. Monitor for respiratory distress. If cough or difficulty breathing develops, evaluate for respiratory tract irritation, bronchitis or pneumonia. Call a physician if symptoms develop or persist.

**Skin Contact:** Wash contacted skin with soap and water. Launder contaminated clothing before re-use. Get medical attention if irritation develops and persists.

**Eye Contact:** Wash contacted skin with soap and water. Launder contaminated clothing before re-use. Get medical attention if irritation develops and persists.

**Ingestion:** If swallowed, have the conscious victim drink plenty of water. Never give anything by mouth to an unconscious or convulsing victim. Get medical attention if symptoms occur.

**Target Organs:** Eyes, skin and respiratory system

**Most Important symptoms/effects:** Dusts may irritate the respiratory tract, skin and eyes. Prolonged exposure may cause chronic effects.

**Indication of Medical Attention and Special Treatment Needed:** Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**General Information:** If exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

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## Section 5: FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media:</b>	Not combustible. Use extinguishing agents suitable for surrounding fire.
<b>Specific Hazards Arising from the Product:</b>	Non-flammable; does not support combustion.
<b>Protective Equipment and Precautions for Fire-Fighters:</b>	This product will not act as fuel to a fire. A full body encapsulating chemical protective suit with positive pressure SCBA may be necessary.

## Section 6: ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions, Protective Equipment and Emergency Procedures:</b>	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Environmental Precautions:</b>	It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway.
<b>Methods and Materials for Containment and Clean-up:</b>	Collect material using shovels, vacuums or other methods that will not generate significant dust exposures to workers. If spill is large, keep public away from spill area. Reprocess, if possible. If not, collect in container appropriate for disposal method.

## Section 7: HANDLING AND STORAGE

<b>Precautions for Safe Handling:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Handle in a manner that will minimize generation of dust. Should be handled in closed systems, if possible. Provide appropriate exhaust ventilation at places where dust is formed. Avoid breathing dust. Compressed air should not be used for cleaning these dusts. Ground containers during transfer of product. Wash before eating, using the washroom or smoking. Launder contaminated clothing before re-use.
<b>Safe Storage:</b>	Store locked up. Keep in a dry location in closed containers.

## Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### Occupational Exposure Limits

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
Barium Sulfate	10 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Crystalline Quartz	0.025 mg/m <sup>3</sup>		Respirable Fraction	

**Biological Limit Values:** No biological exposure limits noted for the ingredient(s)

**Exposure Guidelines:** Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

### Exposure Controls

#### Appropriate Engineering Controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Emergency eyewash station should be available in the vicinity of potential splash exposure.

### Individual Protection Measures

**Eye/Face Protection:** Wear chemical safety glasses with face shield to prevent contact with eyes.

**Skin Protection:** Wear protective clothing as required to prevent contact. Wear appropriate gloves to prevent contact with powder.

**Respiratory Protection:** Wear a NIOSH-approved respirator with dust cartridges if dust concentrations approach the listed exposure limits.

**General Hygiene Considerations:** Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

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## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Tan coloured powder. Particle size: Not Available
<b>Odour:</b>	Odourless
<b>Odour Threshold:</b>	Not available
<b>pH:</b>	7.0 – 9.5
<b>Melting Point and Freezing Point:</b>	1559 °C (2838 °F) (melting); Not available (freezing)
<b>Initial Boiling Point and Boiling Range:</b>	Not available
<b>Flash Point:</b>	Not available
<b>Evaporation Rate:</b>	Not available
<b>Flammability (solid, gas):</b>	Not available
<b>Upper and Lower Flammability or Explosive Limit:</b>	Not available
<b>Vapor Pressure:</b>	Not available
<b>Vapor Density (air = 1):</b>	Not available
<b>Relative Density (water = 1):</b>	4.1 – 4.2
<b>Solubility in Water:</b>	Practically insoluble (less than 0.1%) in water
<b>Solubility in Other Liquids:</b>	Insoluble in common organic solvents
<b>Partition Coefficient, (n-Octanol / Water):</b>	Not available
<b>Auto-ignition Temperature:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Viscosity:</b>	Not available
<b>Physical State:</b>	Solid
<b>Molecular Formula</b>	BaSO <sub>4</sub>
<b>Bulk Density:</b>	1714 – 2163 kg/m <sup>3</sup> (107 – 135lb/ft <sup>3</sup> )

## Section 10: STABILITY AND REACTIVITY

<b>Reactivity:</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical Stability:</b>	Material is stable under normal conditions
<b>Possibility of Hazardous Reactions:</b>	Hazardous polymerization will not occur. No dangerous reaction known under conditions of normal use.

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<b>Conditions to Avoid:</b>	Water, moisture or humidity. Contact with incompatible materials.
<b>Incompatible Materials:</b>	Aluminum in high temperatures can cause explosions. Barium sulfate is also reported to be incompatible with phosphorus and Chlorine.
<b>Hazardous Decomposition Products:</b>	No hazardous decomposition products are known

<b>Section 11: TOXICOLOGICAL INFORMATION</b>
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<b>Skin Corrosion/Irritation:</b>	Contact with skin may cause slight irritation. May cause skin irritation.
<b>Serious Eye Damage/Irritation:</b>	May cause slight irritation. May cause eye irritation.

**STOT (Specific Target Organ Toxicity) – Single Exposure**

<b>Inhalation:</b>	Barium sulphate is considered a nuisance particulate. Good industrial hygiene practices are recommended to keep dusts from becoming airborne. May be irritating to the upper respiratory tract. May cause inflammation of mucous membranes and nosebleeds.
<b>Ingestion:</b>	Swallowing this product is not expected to cause toxic effects.

**STOT (Specific Target Organ Toxicity) – Repeated Exposure:**

<b>Respiration and/or Skin Sensitization:</b>	This product contains approximately 10% crystalline silica. Long-term exposure to products containing crystalline silica may cause silicosis. Avoid inhalation. May cause long-term inflammation of mucous membranes of the eyes and respiratory tract. Prolonged and heavy exposures of Barium Sulphate may cause Baritosis, a benign pneumoconiosis. This benign pneumoconiosis does not result in impairment of ventilatory function, although signs of mild bronchial irritation may occur.
<b>Respiratory and/or Skin Sensitization:</b>	Not considered a sensitizer.

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**Carcinogenicity:**

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However, in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

**Reproductive Toxicity:**

Not considered a reproductive hazard

**Germ Cell Mutagenicity:**

Not considered a mutagenic

**Interactive Effects:**

No information found

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity:**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Other adverse effects:**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## Section 13: DISPOSAL CONSIDERATIONS

**Disposal Considerations:**

This product should be considered for recycling and re-use. If the product is not being recycled or re-used, dispose of in accordance with local, provincial/state and federal regulations.

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**Waste from residues / unused products:** Dispose of in accordance with local regulations

**Contaminated Packaging:** Emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## Section 14: TRANSPORT INFORMATION

**Special Precaution:** Not applicable. Not regulated under Canadian TDG Regulations.

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

## Section 15: REGULATORY INFORMATION

### Safety, Health and Environmental Regulations - Canada

**WHMIS Classification:** Not a WHMIS controlled product. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Regulations.

**Domestic Substances List / Non-Domestic Substances List:** All components of this product are listed on the DSL inventory or do not require listing.

## Section 16: OTHER INFORMATION

### Disclaimer:

The information contained herein is based on data available to us and is believed to be true and accurate. However, no guarantee or warranty is provided, expressed or implied, by the company or its subsidiaries regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained from the use thereof. Since the use of this product is within the exclusive control of the user, we do not assume any responsibility and expressly disclaim any liability for any use of this product. It is the user's responsibility to determine the conditions of safe use, storage, and disposal of the product. Compliance with all applicable federal, provincial, and local regulations remains the responsibility of the user.

**Prepared by:** Bri-Chem Supply Ltd.

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