

## Barite

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Barite
<b>Other Means of Identification</b>	Barium Sulfate
<b>Other Identification</b>	Baryte
<b>Recommended Use</b>	Drilling Mud Additive.
<b>Manufacturer / Supplier</b>	AES Drilling Fluids, LLC, 11767 Katy Freeway, Suite 230, Houston, TX, 77079, Sales & Information, 281-556-5628
<b>Emergency Phone No.</b>	CHEMTREC, 1-800-424-9300, 24-hour Emergency
<b>SDS No.</b>	0218
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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Skin corrosion/irritation - Category 3; Carcinogenicity - Category 1A; Specific target organ toxicity (repeated exposure) - Category 1

#### GHS Label Elements



Signal Word:

Danger

Hazard Statement(s):

EYE: Dust in eye may result in mechanical irritation.

H350 May cause cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

In case of inadequate ventilation, wear respiratory protection.

Wear safety glasses or goggles where elevated dust concentrations are a concern.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Barium sulfate	7727-43-7	84-98	
Silica, quartz	14808-60-7	1-5	
Calcium carbonate	471-34-1	1-5	
Clay	1332-58-7	0.1-6.0	

## SECTION 4. FIRST-AID MEASURES

### First-aid Measures

#### Inhalation

Remove source of exposure or move to fresh air. Get medical advice/attention if irritation develops.

#### Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Get medical advice/attention if you feel unwell or are concerned.

#### Eye Contact

Flush eyes thoroughly with lukewarm water for 15 minutes. If eye irritation persists, get medical advice/attention.

#### Ingestion

Rinse mouth with water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Get medical advice/attention if you feel unwell or are concerned.

## SECTION 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

### Specific Hazards Arising from the Chemical

Does not burn.

Not known to generate any hazardous decomposition products in a fire.

### Special Protective Equipment and Precautions for Fire-fighters

No specific procedures given.

When fighting chemical fires, emergency responders should wear NIOSH approved self contained breathing apparatus and appropriate protective clothing.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

### Environmental Precautions

Prevent product from entering drains, soil, ditches, sewers, waterways and/or groundwater.

### Methods and Materials for Containment and Cleaning Up

Avoid dry sweeping. If necessary, use a dust suppressant such as water. Do not use compressed air for clean-up. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Use water fog or spray curtain to reduce amount of dust in air. Store recovered product in suitable containers that are: tightly-covered. Dispose of according to local, state and federal regulations.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Do not breathe in this product. Only use where there is adequate ventilation. Avoid skin and eye contact. Avoid creating

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excessive dust while handling the product. See Section 8 for appropriate Personal Protective Equipment (PPE). Immediately remove contaminated clothing using the method that minimizes exposure.

**Conditions for Safe Storage**

Store in an area that is: well-ventilated. Keep containers tightly closed when not in use. Use good housekeeping to prevent accumulation of dust.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control Parameters**

Chemical Name	ACGIH® TLV®		OSHA PEL		AIHA® WEEL™	
	TWA	STEL [C]	TWA	Ceiling	8-hr TWA	Short-term TWA [C]
Clay	3.0 mg/m3		5.0 mg/m3		Not established	
Silica, quartz	0.025 mg/m3 A2		0.1 mg/m3		Not established	
Barium sulfate	5.0 mg/m3 (I)		5.0 mg/m3 (R)			
Calcium carbonate	5 mg/m3 (R)		5 mg/m3 (R)			

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. AIHA® = AIHA® Guideline Foundation. Short-term TWA = Time-Weighted Average with specified time limit. R = Respirable fraction. I = Inhalable fraction. Product may cause irritation similar to nuisance dust and meet the criteria of Particulates Not Otherwise Specified inhalable particles, or total particles.

**Appropriate Engineering Controls**

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. While working with the product an eyewash and safety shower should be within acceptable distance to the work area.

**Individual Protection Measures**

**Eye/Face Protection**

Safety glasses with side shields are recommended to prevent eye contact. Use goggles or face shield when there is risk of eye contact or visible dust produced.

**Skin Protection**

Wear appropriate gloves while handling product. Wear long sleeves, long pants and appropriate footwear while working with product.

**Respiratory Protection**

If conditions of use promote large amounts of dust to gather in the work area, wear NIOSH approved dust mask or respirator.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Basic Physical and Chemical Properties**

<b>Appearance</b>	White - tan powder.
<b>Odour</b>	Odourless
<b>pH</b>	Not available
<b>Melting Point/Freezing Point</b>	2876 °F (1580 °C) (melting); Not available (freezing)
<b>Initial Boiling Point/Range</b>	2912 °F (1600 °C)
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid, gas)</b>	Will not burn.

<b>Upper/Lower Flammability or Explosive Limit</b>	Not applicable (upper); Not applicable (lower)
<b>Vapour Pressure</b>	Not applicable
<b>Vapour Density (air = 1)</b>	Not applicable
<b>Relative Density (water = 1)</b>	4.2 - 4.5
<b>Solubility</b>	Insoluble in water
<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	Not available
<b>Other Information</b>	
<b>Physical State</b>	Solid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions of use.

### Chemical Stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

### Conditions to Avoid

Generation of dust.

### Incompatible Materials

None.

### Hazardous Decomposition Products

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

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; eye contact; skin contact; ingestion.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Clay	Not available	> 5,000 mg/kg (rat)	> 5,000 mg/kg (rat)
Silica, quartz	Not available	500 mg/kg (rat)	Not available
Barium sulfate	Not available	Not available	Not available
Calcium carbonate	Not available	6,450 mg/kg (rat)	Not available

### Skin Corrosion/Irritation

May cause skin irritation.

### Serious Eye Damage/Irritation

May cause eye irritation. May cause mechanical irritation to eyes.

### STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

High dust levels may cause irritation of the respiratory tract, including sneezing and coughing.

#### Ingestion

May cause discomfort if swallowed.

### STOT (Specific Target Organ Toxicity) - Repeated Exposure

This product contains small amounts of crystalline silica (quartz). long term exposure to respirable crystalline silica dust

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over the TLV may lead to the development of silicosis or other respiratory problems. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function.

#### **Respiratory and/or Skin Sensitization**

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

#### **Carcinogenicity**

<b>Chemical Name</b>	<b>IARC</b>	<b>ACGIH®</b>	<b>NTP</b>	<b>OSHA</b>
Clay	Not evaluated	A4	Not Listed	Not Listed
Silica, quartz	Group 1	A2	Known carcinogen	Not Listed
Barium sulfate	Not Listed	Not Listed	Not Listed	Not Listed
Calcium carbonate	Not Listed	Not Listed	Not Listed	Not Listed

This product contains free silica which the International Agency for Research on Cancer (IARC) has listed as causing cancer in humans.

#### **Key to Abbreviations**

IARC = International Agency for Research on Cancer. Group 1 = Carcinogenic to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A2 = Suspected human carcinogen. A4 = Not classifiable as a human carcinogen. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration.

#### **Reproductive Toxicity**

##### **Development of Offspring**

Not known to harm the unborn child.

##### **Sexual Function and Fertility**

Not known to cause effects on sexual function or fertility.

##### **Effects on or via Lactation**

Not known to cause effects on or via lactation.

#### **Germ Cell Mutagenicity**

Not known to be a mutagen.

## **SECTION 12. ECOLOGICAL INFORMATION**

#### **Toxicity**

No information was located.

##### **Acute Aquatic Toxicity**

<b>Chemical Name</b>	<b>LC50 Fish</b>	<b>EC50 Crustacea</b>	<b>ErC50 Aquatic Plants</b>	<b>ErC50 Algae</b>
Clay	> 1,100 mg/L (Daphnia pulex (water flea); 48-hour)	Not available	Not available	Not available
Silica, quartz	Not available	Not available	Not available	Not available
Barium sulfate	Not available	32 mg/L (Daphnia magna (water flea); 48-hour; fresh water; static)	Not available	Not available

#### **Persistence and Degradability**

No information was located.

#### **Bioaccumulative Potential**

No information was located.

#### **Mobility in Soil**

No information was located.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Dispose of in accordance with all local, state and federal regulations. Not classified as RCRA Hazardous. RCRA WASTE NUMBER: Not Applicable.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under US DOT Regulations.

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### USA

#### Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

#### Additional USA Regulatory Lists

CERCLA: Product does not contain any chemicals subject to the reporting requirement of CERCLA.

SARA Title III - Section 302: No listed components.

SARA Title III - Section 311/312: Chronic Health Hazard.

SARA Title III - Section 313: No chemicals are reportable under Section 313.

## SECTION 16. OTHER INFORMATION

**NFPA Rating**                      **Health - 1**      **Flammability - 0**      **Instability - 0**

**SDS Prepared By**              AES Drilling Fluids

**Phone No.**                        281-556-5628

**Date of Preparation**            February 26, 2015

**Disclaimer**                        Do not handle or use until precautions on MSDS are read and understood. The information on this form is furnished solely for the purpose of enabling those who transport, handle or use our products to ensure the safety and health of their employees and to comply with various laws and regulations (federal, state and local). We believe the statements, technical information and recommendations contained herein are reliable but, they are given without warranty or guarantee of any kind, express or implied and we assume no responsibility for any loss, damage, direct or consequential, arising out of their use.

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