

# SAFETY DATA SHEET

## BARITE

Revision Date: 09-Oct-2015

Revision Number: 44

### 1. Product Identifier & Identity for the Chemical

**Statement of Hazardous Nature** Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Non-Dangerous Goods according to the criteria of ADG.

#### 1.1. Product Identifier

**Product Name** BARITE

#### Other means of Identification

**Synonyms:** None  
**Product Code:** HM000105

#### Recommended use of the chemical and restrictions on use

**Recommended Use** Weight Additive  
**Uses Advised Against** No information available

#### Supplier's name, address and phone number

**Manufacturer/Supplier** Parnoun Tejarat Co. Ltd.  
No.11 first floor, unit No.8, Miremad str  
Tehran

Iran

Telephone Number: + 98 21 88752248  
Fax Number: +98 21 88752362  
parnoun@yandex.com

#### E-Mail address:

#### Emergency phone number

+ 98 21 88752248

### 2. Hazard Identification

**Statement of Hazardous Nature** Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Non-Dangerous Goods according to the criteria of ADG.

#### Classification of the hazardous chemical

Carcinogenicity	Category 2 - H351
Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373

#### Label elements, including precautionary statements

#### Hazard Pictograms



<b>Signal Word</b>	Warning
<b>Hazard Statements</b>	H351 - Suspected of causing cancer if inhaled H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
<b>Precautionary Statements</b>	
<b>Prevention</b>	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P260 - Do not breathe dust/fume/gas/mist/vapors/spray P281 - Use personal protective equipment as required
<b>Response</b>	P308 + P313 - IF exposed or concerned: Get medical advice/attention P314 - Get medical attention/advice if you feel unwell
<b>Storage</b>	P405 - Store locked up
<b>Disposal</b>	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations
<b>Contains Substances</b>	<b>CAS Number</b>
Barium sulfate	7727-43-7
Crystalline silica, quartz	14808-60-7

**Other hazards which do not result in classification**

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).  
This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

**Australia Classification**

For the full text of the H-phrases mentioned in this Section, see Section 16

**Classification** T - Toxic.

**Risk Phrases** R49 May cause cancer by inhalation.  
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

### 3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Australia
Barium sulfate	7727-43-7	60 - 100%	
Crystalline silica, quartz	14808-60-7	1 - 5%	Carc. 2 (H351) STOT RE 1 (H372)

### 4. First aid measures

**Description of necessary first aid measures**

**Inhalation** If inhaled, remove from area to fresh air. Get medical attention if respiratory

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<b>Eyes</b>	irritation develops or if breathing becomes difficult. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
<b>Skin</b>	Wash with soap and water. Get medical attention if irritation persists.
<b>Ingestion</b>	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

**Symptoms caused by exposure**

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.

**Medical Attention and Special Treatment**

**Notes to Physician** Treat symptomatically

## 5. Fire Fighting Measures

**Suitable extinguishing equipment****Suitable Extinguishing Media**

All standard fire fighting media

**Extinguishing media which must not be used for safety reasons**

None known.

**Specific hazards arising from the chemical****Special Exposure Hazards**

None anticipated

**Special protective equipment and precautions for fire fighters****Special Protective Equipment for Fire-Fighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

## 6. Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Avoid creating and breathing dust.

**6.2. Environmental precautions**

Prevent from entering sewers, waterways, or low areas.

**6.3. Methods and material for containment and cleaning up**

Collect using dustless method and hold for appropriate disposal. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage and disposal.

## 7. Handling and storage

**7.1. Precautions for Safe Handling****Handling Precautions**

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear a NIOSH certified, European Standard En 149, or equivalent respirator when using this product. Material is slippery when wet.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities****Storage Information**

Store in a well ventilated area. Keep container closed when not in use. Store locked up. Store in a cool, dry location. Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use. Do not reuse empty container.

**Other Guidelines**

## 10. Stability and Reactivity

### 10.1. Reactivity

Not expected to be reactive.

### 10.2. Chemical Stability

Stable

### 10.3. Possibility of Hazardous Reactions

Will Not Occur

### 10.4. Conditions to Avoid

None anticipated

### 10.5. Incompatible Materials

None known.

### 10.6. Hazardous Decomposition Products

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

## 11. Toxicological Information

### Information on routes of exposure

**Principle Route of Exposure** Eye or skin contact, inhalation.

### Symptoms related to exposure

#### **Most Important Symptoms/Effects**

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.

### Numerical measures of toxicity

#### Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Barium sulfate	7727-43-7	> 5000 mg/kg (Rat) > 3000mg/kg (Mouse)	No data available	>1.1 mg/L (rat, aerosol, 4hr) (similar substance)
Crystalline silica, quartz	14808-60-7	>15,000 mg/kg (Human)	No data available	No data available

### Immediate, delayed and chronic health effects from exposure

#### **Product Information**

##### **Inhalation**

Under certain conditions of use, some of the product ingredients may cause the following:  
Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A).

Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below).

##### **Eye Contact**

May cause mechanical irritation to eye.

##### **Skin Contact**

None known.

##### **Ingestion**

May produce nervous system effects such as feeling of weakness, unsteady walk, and dilation of blood vessels. May affect the heart and cardiovascular system.

#### **Chronic Effects/Carcinogenicity**

**Silicosis:** Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

**Cancer Status:** The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to

No information available

## 8. Exposure Controls/Personal Protection

### Control parameters - exposure standards, biological monitoring

#### Exposure Limits

Substances	CAS Number	Australia NOHSC	ACGIH TLV-TWA
Barium sulfate	7727-43-7	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>
Crystalline silica, quartz	14808-60-7	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.025 mg/m <sup>3</sup>

#### Appropriate engineering controls

##### **Engineering Controls**

Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits.

#### Personal protective equipment (PPE)

##### **Personal Protective Equipment**

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

##### **Respiratory Protection**

Wear a NIOSH certified, European Standard EN 149 (FFP2/FFP3), AS/NZS 1715, or equivalent respirator when using this product.

##### **Hand Protection**

Normal work gloves.

##### **Skin Protection**

Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.

##### **Eye Protection**

Wear safety glasses or goggles to protect against exposure.

##### **Other Precautions**

None known.

##### **Environmental Exposure Controls**

No information available

## 9. Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

**Physical State:** Solid  
**Odor:** Odorless

**Color:** Pink to tan to gray  
**Odor Threshold:** No information available

#### Property

#### Values

Remarks/ - Method

##### **pH:**

No data available

##### **Freezing Point/Range**

No data available

##### **Melting Point/Range**

No data available

##### **Boiling Point/Range**

No data available

##### **Flash Point**

No data available

##### **Evaporation rate**

No data available

##### **Vapor Pressure**

No data available

##### **Vapor Density**

No data available

##### **Specific Gravity**

4.23

##### **Water Solubility**

Insoluble in water

##### **Solubility in other solvents**

No data available

##### **Partition coefficient: n-octanol/water**

No data available

##### **Autoignition Temperature**

No data available

##### **Decomposition Temperature**

No data available

##### **Viscosity**

No data available

##### **Explosive Properties**

No information available

##### **Oxidizing Properties**

No information available

### 9.2. Other information

#### **Molecular Weight**

233.4

#### **VOC Content (%)**

No data available

humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2). There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by scarring of the lungs, skin, and other internal organs) and kidney disease.

Prolonged inhalation of fine barium sulfate dusts form harmless nodular granules in lung, an affliction called baritosis. Baritosis produces no symptoms of bronchitis or emphysema, and lung functioning is not affected although dyspnea, upon exertion, may occur. The nodulation disappears if exposure is stopped.

#### **Exposure Levels**

No data available

#### **Interactive effects**

Individuals with respiratory disease, including but not limited to asthma and bronchitis, or subject to eye irritation, should not be exposed to quartz dust.

#### **Data limitations**

No data available

Substances	CAS Number	Skin corrosion/irritation
Barium sulfate	7727-43-7	Non-irritating to the skin (in vitro) (similar substances)
Crystalline silica, quartz	14808-60-7	Non-irritating to the skin

Substances	CAS Number	Eye damage/irritation
Barium sulfate	7727-43-7	Non-irritating to the eye (similar substances)
Crystalline silica, quartz	14808-60-7	Mechanical irritation of the eyes is possible.

Substances	CAS Number	Skin Sensitization
Barium sulfate	7727-43-7	Did not cause sensitization on laboratory animals (mouse) (similar substances)
Crystalline silica, quartz	14808-60-7	No information available.

Substances	CAS Number	Respiratory Sensitization
Barium sulfate	7727-43-7	No information available
Crystalline silica, quartz	14808-60-7	No information available

Substances	CAS Number	Mutagenic Effects
Barium sulfate	7727-43-7	In vitro tests did not show mutagenic effects (similar substances)
Crystalline silica, quartz	14808-60-7	Not regarded as mutagenic.

Substances	CAS Number	Carcinogenic Effects
Barium sulfate	7727-43-7	Did not show carcinogenic effects in animal experiments (similar substances)
Crystalline silica, quartz	14808-60-7	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure. Based on available scientific evidence, this substance is a threshold carcinogen with a mode of action involving indirect genotoxicity secondary to lung injury.

Substances	CAS Number	Reproductive toxicity
Barium sulfate	7727-43-7	No information available
Crystalline silica, quartz	14808-60-7	No information available

Substances	CAS Number	STOT - single exposure
Barium sulfate	7727-43-7	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Crystalline silica, quartz	14808-60-7	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Barium sulfate	7727-43-7	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Crystalline silica, quartz	14808-60-7	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)

Substances	CAS Number	Aspiration hazard
Barium sulfate	7727-43-7	Not applicable
Crystalline silica, quartz	14808-60-7	Not applicable

## 12. Ecological Information

### Ecotoxicity

#### **Product Ecotoxicity Data**

No data available

#### **Substance Ecotoxicity Data**

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Barium sulfate	7727-43-7	No information available	LC50 (96h) 3.5 mg/L (Danio rerio) BCF 1.2-74.4 L/kg (Lepomis macrochirus)	No information available	NOEC (7d) 100 mg/L (Cancer anthonyi)
Crystalline silica, quartz	14808-60-7	No information available	LL0 (96h) 10,000 mg/L (Danio rerio) (similar substance)	No information available	LL50 (24h) > 10,000 mg/L (Daphnia magna) (similar substance)

### 12.2. Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

Substances	CAS Number	Persistence and Degradability
Barium sulfate	7727-43-7	The methods for determining biodegradability are not applicable to inorganic substances.
Crystalline silica, quartz	14808-60-7	The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3. Bioaccumulative potential

Does not bioaccumulate

Substances	CAS Number	Log Pow
Barium sulfate	7727-43-7	No information available
Crystalline silica, quartz	14808-60-7	No information available

### 12.4. Mobility in soil

Substances	CAS Number	Mobility
Barium sulfate	7727-43-7	No information available
Crystalline silica, quartz	14808-60-7	No information available

### 12.6. Other adverse effects

#### **Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

## 13. Disposal Considerations

### Safe handling and disposal methods

Bury in a licensed landfill according to federal, state, and local regulations. Substance should NOT be deposited into a sewage facility.

### Disposal of any contaminated packaging

Follow all applicable national or local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

**Environmental regulations**

Not applicable

**14. Transport Information****Transportation Information**

**UN Number:** Not restricted  
**UN Proper Shipping Name:** Not restricted  
**Transport Hazard Class(es):** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards:** Not applicable

**Special precautions during transport**

None

**HazChem Code**

None Allocated

**15. Regulatory Information****Safety, health and environmental regulations specific for the product****International Inventories**

**Australian AICS Inventory** All components listed on inventory or are exempt.  
**New Zealand Inventory of Chemicals** All components listed on inventory or are exempt.  
**EINECS Inventory** This product, and all its components, complies with EINECS  
**US TSCA Inventory** All components listed on inventory or are exempt.  
**Canadian DSL Inventory** All components listed on inventory or are exempt.

**Poisons Schedule number**

None Allocated

**16. Other information****Date of preparation or review****Revision Date:** 09-Oct-2015**Revision Note**

SDS sections updated: 2

**Full text of R-phrases referred to under Sections 2 and 3**

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
R49 May cause cancer by inhalation.

**Full text of H-Statements referred to under sections 2 and 3**

H351 - Suspected of causing cancer if inhaled  
H372 - Causes damage to organs through prolonged or repeated exposure  
H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

**Additional information**

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.



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**Key abbreviations or acronyms used**

bw - body weight  
CAS - Chemical Abstracts Service  
EC50 - Effective Concentration 50%  
LC50 - Lethal Concentration 50%  
LD50 - Lethal Dose 50%  
LL50 - Lethal Loading 50%  
mg/kg - milligram/kilogram  
mg/L - milligram/liter  
NOEC - No Observed Effect Concentration  
OEL - Occupational Exposure Limit  
PBT - Persistent Bioaccumulative and Toxic  
ppm - parts per million  
STEL - Short Term Exposure Limit  
TWA - Time-Weighted Average  
vPvB - very Persistent and very Bioaccumulative  
h - hour  
mg/m<sup>3</sup> - milligram/cubic meter  
mm - millimeter  
mmHg - millimeter mercury  
w/w - weight/weight  
d - day

**Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)  
NZ CCID

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**End of Safety Data Sheet**