

SAFETY DATA SHEET

Barite



SECTION 1: Product Identification

1.1 Product Identifier

Product Name:	Barite – Drilling Grade
Product Type:	Mineral
Chemical Name:	Barium Sulphate
Synonyms:	Barite, Baryte
CAS Number:	7727-43-7
EC Number:	231-784-4
Chemical Formula:	BaSO ₄

1.2 Recommended use and restrictions on use

Relevant identified uses:	Weighting agent for oil & gas drilling fluids Drilling fluid additive Industrial mineral for oilfield applications
Uses Advised Against:	Consumer use Food, pharmaceutical, or medical applications

1.3 Supplier's Name and Contact Details

Altra Argentina S.A.
Telephone: +54 911 3460 6034
e-mail: sales@altra.ar
Website: www.altra.ar

1.4. Emergency telephone number

Emergency contact available through local emergency services according to country of operation.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

According to Regulation (EC) No. 1272/2008 (CLP) and GHS criteria, this substance is classified due to the presence of respirable crystalline silica (quartz) as a minor impurity:

- Carcinogenicity: Category 1A (inhalation)
- Specific Target Organ Toxicity (Repeated Exposure): Category 2 (lungs)

2.2 Label elements

Signal word:

Danger

Hazard pictogram:



Hazard Statements:

H350 - May cause cancer by inhalation
H373 - May cause damage to organs (lungs) through prolonged or repeated inhalation exposure.

Precautionary statements:

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
P262 - Avoid contact with eyes and skin
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/eye protection/face protection
P284 - Use respiratory protection.

Response:

P308 + P313 - IF exposed or concerned: Get medical advice/attention
P314 - Get medical attention/advice if you feel unwell

Storage:

P402 + P403 + P235 + P233 – Store in a dry, well-ventilated place.

Disposal:

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Other hazards

This product does not contain any PBT or vPvB substances.

SAFETY DATA SHEET

Barite



SECTION 3: Composition/Information on Ingredients

3.1 Substances

Name	CAS No	EC No	% (w/w)	Chemical composition
Barium sulphate (Barite)	7727-43-7	231-784-4	≥ 90.0 %	Naturally occurring barium sulphate mineral (BaSO ₄). Insoluble, chemically inert under normal conditions of use.
Crystalline silica (Quartz)*	14808-60-7	238-878-4	< 1 – 3 %	Naturally occurring mineral impurity associated with the ore. Present as quartz (SiO ₂).

* Crystalline silica (quartz) is present as a naturally occurring impurity and is not intentionally added.

Additional information

- This product is a naturally occurring mineral and does not have a single defined molecular formula beyond its principal component (BaSO₄).
- The classification of this product is related to the potential presence of respirable crystalline silica dust generated during handling, transport, or processing.
- Occupational exposure depends on dust generation, ventilation, and applied control measures.

SECTION 4: First-aid measures

4.1 Description of first aid measures

Inhalation:	Move the exposed person to fresh air immediately. Keep at rest in a position comfortable for breathing. If symptoms persist or discomfort continues, seek medical attention. If breathing has stopped, give artificial respiration and seek immediate medical assistance.
Skin Contact:	Wash affected area immediately with plenty of water and soap for at least 15 minutes. Remove contaminated clothing. Get medical attention if irritation or discomfort continues.
Eye Contact:	Rinse immediately with plenty of clean water, including under the eyelids, for at least 15 minutes. Remove contact lenses if present and easy to do. Get medical attention if irritation persists.
Ingestion:	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if discomfort occurs.

4.2 Most important symptoms and effects, both acute and delayed

Exposure to respirable crystalline silica dust may cause lung disease, including silicosis, and has been associated with lung cancer following prolonged and repeated inhalation.

Inhalation:	Irritation of the respiratory tract may occur. Prolonged exposure to respirable dust may result in delayed respiratory effects.
Skin contact:	No specific symptoms noted.
Eye contact:	Mechanical irritation may occur.
Ingestion:	No specific symptoms noted.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable Extinguishing Media	All standard firefighting media. Substance is nonflammable. Use fire extinguishing media appropriate for surrounding materials.
Unsuitable Extinguishing Media	No information available
Explosion Limits Upper	No data available
Explosion Limits Lower	No data available
Oxidizing Properties	Not oxidizing
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

5.2 Special hazards arising from the substance or mixture

The product is not flammable or explosive. Decomposition in fire conditions may produce sulphur oxides. Keep product and empty containers away from heat and sources of ignition.

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

Ensure adequate ventilation. Avoid dust formation. Use appropriate personal protective equipment. Avoid contact with skin, eyes, and clothing.

6.2 Environmental precautions

The product should not be released into the environment but collected and delivered according to agreement with the local authorities. See Section 12 for additional Ecological Information.

6.3 Methods and material for containment and cleaning up

Collect material mechanically (e.g., sweeping or shoveling) and place into suitable containers for disposal. Avoid generating dust. Provide adequate ventilation during clean-up operations.

6.4 Reference to other sections

For personal protection see section 8. For waste disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Avoid dust formation.
- Do not breathe dust.
- Ensure adequate ventilation at the workplace.
- Use appropriate personal protective equipment as specified in Section 8.
- Avoid contact with skin and eyes.
- Handle in accordance with good industrial hygiene and safety practices.

7.2 Conditions for safe storage, including any incompatibilities

- Store in a dry, cool, and well-ventilated area.
- Keep containers tightly closed when not in use.
- Protect from moisture.
- Store away from incompatible materials and sources of excessive heat.
- No specific incompatibilities are known.

7.3 Specific end use(s)

- This product is intended for industrial use as a weighting agent in oil and gas drilling fluids.
- Refer to the Technical Data Sheet (TDS) for further information on product application.

SECTION 8: Exposure controls / personal protection

8.1 Control parameters - Occupational exposure limits

OSHA (USA):

- Total dust: 15 mg/m³
- Respirable fraction: 5 mg/m³

NIOSH (USA):

- Respirable crystalline silica (REL): 0.05 mg/m³ (8-hour TWA)

Canada (most provinces):

- Total dust: 10 mg/m³
- Respirable fraction: 3 mg/m³

European Union – Indicative Occupational Exposure Limits (OELs):

Inhalable dust (mg/m³):

Austria 15; Belgium 10; Denmark 10; Finland 10; France 10; Germany 10; Greece 10; Ireland 10; Italy 10; Luxembourg 10; Netherlands 10; Norway 10; Portugal 10; Slovakia 10; Spain 10; United Kingdom 10.

Respirable dust (mg/m³):

Austria 5; Belgium 3; Bulgaria 4; Denmark 5; Finland 5; France 5; Germany 3; Greece 5; Ireland 4; Italy 3; Lithuania 10; Luxembourg 6; Netherlands 5; Norway 5; Portugal 5; Romania 10; Spain 3; Sweden 5; Switzerland 6; United Kingdom 4.

8.2 Exposure controls

- Isolate the process area where practicable.
- Use local exhaust ventilation or other engineering controls to maintain airborne dust concentrations below applicable occupational exposure limits.
- In confined or enclosed areas, mechanical ventilation or dust extraction systems must be provided.
- Avoid creating dust conditions.
- Periodic monitoring of airborne dust concentrations is recommended, particularly where material handling, transfer, or processing occurs.

8.3 Personal Protection

Eye / face protection: Wear appropriate protective safety glasses or chemical safety goggles in accordance with OSHA regulations (29 CFR 1910.133) or European Standard EN 166.

Skin and body protection: Wear appropriate protective gloves and work clothing to prevent skin exposure and contamination.

Respiratory protection: Where airborne dust concentrations may exceed occupational exposure limits, use an approved particulate respirator (e.g. NIOSH-approved or EN-certified).

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.
Wash hands and exposed skin thoroughly after handling.
Do not eat, drink, or smoke when using this product



SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Grey to off-white powder or solid mineral.
Odour:	Odourless.
Odour threshold:	Not applicable.
pH:	Not applicable (insoluble in water).
Melting point / freezing point:	~1580 °C (decomposes).
Initial boiling point and boiling range:	Not applicable.
Flash point:	Not applicable (non-flammable).
Evaporation rate:	Not applicable.
Flammability (solid, gas):	Non-flammable.
Upper / lower flammability or explosive limits:	Not applicable.
Vapour pressure:	Not applicable.
Vapour density:	Not applicable.
Relative density:	Approximately $\geq 4.20 \text{ g/cm}^3$
Solubility:	Insoluble in water and oil.
Partition coefficient (n-octanol / water):	Not applicable.
Auto-ignition temperature:	Not applicable.
Decomposition temperature:	No decomposition under normal conditions of use.
Viscosity:	Not applicable.

9.2 Other information

VOC Content (%): Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific reactivity hazards are associated with this product under normal conditions of use.

10.2 Chemical stability

The material is chemically stable under normal ambient conditions and under anticipated conditions of storage and handling.

10.3 Possibility of hazardous reactions

No hazardous reactions are known under normal conditions of use.

10.4 Conditions to avoid

Avoid generation of excessive dust. No other specific conditions are known that may result in a hazardous situation.

10.5 Incompatible materials

No specific incompatible materials are known.

10.6 Hazardous decomposition products

None under normal conditions. Thermal decomposition under extreme heat may generate sulphur oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute Oral Toxicity:	Practically non-toxic. Barium sulphate is insoluble and poorly absorbed. No acute oral toxicity data indicating hazard.
Acute Dermal Toxicity:	No specific conclusive data available. Based on available information, no acute dermal toxicity is expected.
Acute Toxicity Inhalation:	No specific conclusive data available. Dust inhalation may cause mechanical irritation of the respiratory tract.
Chronic exposure:	Chronic or prolonged exposure to respirable dust above applicable occupational exposure limits may cause adverse respiratory effects. Prolonged inhalation of respirable crystalline silica dust may lead to lung disease, including silicosis, and has been associated with lung cancer.
Skin corrosion / irritation:	Not expected to cause skin corrosion. Prolonged or repeated contact may cause mild mechanical irritation.
Serious eye damage / eye irritation:	Dust may cause mechanical eye irritation.
Respiratory or skin sensitization:	Not expected to cause sensitization.
Germ cell mutagenicity:	No information available. Based on available data, no mutagenic effects are expected.
Carcinogenicity:	Barium sulphate itself is not classified as carcinogenic. However, the product may contain low levels of respirable crystalline silica (quartz), which is classified as carcinogenic by inhalation (IARC Group 1). The risk depends on the duration and level of exposure to respirable dust.
Reproductive toxicity:	No information available. Based on available data, no reproductive toxicity is expected.
Specific target organ toxicity – single exposure (STOT SE):	No information available.
Specific target organ toxicity – repeated exposure (STOT RE):	Prolonged or repeated inhalation of respirable dust may affect the lungs.
Aspiration hazard:	Not applicable (solid mineral).
Endocrine disrupting properties:	No information available.

SECTION 12: Ecological information

12.1 Toxicity

Based on available information, the product is not classified as hazardous to the aquatic environment.

Toxicity to aquatic organisms:	No acute toxicity data indicating environmental hazard are available. Due to the insoluble and inert nature of barium sulphate, adverse effects on aquatic organisms are not expected under normal conditions of use.
--------------------------------	--

Toxicity to microorganisms:	No information available.
-----------------------------	---------------------------

12.2 Persistence and degradability

Methods for determining biodegradability are not applicable to inorganic substances.
The product is not biodegradable.

12.3 Bioaccumulative potential

No data available. Due to its low solubility, bioaccumulation is not expected.

12.4 Mobility in soil

The product is not likely to be mobile in soil due to its low water solubility.

12.5 Results of PBT and vPvB assessment

This product does not contain PBT or vPvB substances.

12.6 Endocrine disrupting properties

Not listed

12.7 Other adverse effects

No other adverse environmental effects are known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal Method: Dispose of in accordance with applicable local, regional, national, and international regulations.
Material may be disposed of as non-hazardous industrial waste, subject to local authority requirements.

13.2 Additional information

Waste generators must determine whether the discarded material is classified as hazardous waste in accordance with applicable regulations.
Consult local, regional, and national waste disposal regulations to ensure proper classification and disposal.

SAFETY DATA SHEET

Barite



SECTION 14: Transport information

14.1 UN number	Not applicable.
14.2 UN proper shipping name	Not applicable.
14.3 Transport hazard class(es)	Not classified as dangerous goods for transport.
14.4 Packing group	Not applicable.
14.5 Environmental hazards	Not classified as environmentally hazardous. Not a marine pollutant.
14.6 Special precautions for user	No special precautions are required for transport under normal conditions. Avoid generating dust during handling and transport. Ensure containers or packaging are properly secured to prevent spillage.
14.7 Transport in bulk according To Annex II of MARPOL and The IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This product has been classified and labeled in accordance with applicable regulations, including:

- Regulation (EC) No. 1272/2008 (CLP)
- Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
- OSHA Hazard Communication Standard (29 CFR 1910.1200)

Barium sulphate is a naturally occurring mineral and is exempt from REACH registration in accordance with REACH Regulation (EC) No. 1907/2006, Annex V.

Crystalline silica (quartz), present as a naturally occurring impurity, is subject to occupational exposure limits and applicable workplace regulations.

15.2 Chemical Safety Assessment

Not applicable. No chemical safety assessment has been carried out.

SECTION 16: Other information

For additional information on the use of this product, contact your Altra Argentina S.A. representative.

This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and applicable regulatory requirements.

References

- Regulation (EC) No. 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures (CLP).
- Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Annex V.
- Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
- OSHA Hazard Communication Standard (29 CFR 1910.1200).
- NIOSH Pocket Guide to Chemical Hazards.
- IARC Monographs on the Evaluation of Carcinogenic Risks to Humans – Crystalline Silica (Quartz).
- European Chemicals Agency (ECHA) – Substance Information.

The information provided in this Safety Data Sheet is based on current knowledge and is believed to be accurate at the date of issue.

It is intended to describe the product for the purposes of health, safety, and environmental protection only and does not constitute a guarantee of specific properties.

The user is responsible for ensuring compliance with all applicable laws and regulations and for determining the suitability of the product for a particular application.

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging Regulation (EC No. 1272/2008)
EC No.	European Community number
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (EC No. 1907/2006)
STOT RE	Specific Target Organ Toxicity – Repeated Exposure
PBT	Persistent, Bioaccumulative and Toxic
vPvB	very Persistent and very Bioaccumulative
UN	United Nations

SAFETY DATA SHEET

Barite



Disclaimer Statement

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by purchase, resale, use or exposure.

End of Safety Data Sheet