

# Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations


Printing date: January 11, 2019

Revision: January 11, 2019

## 1 Identification

- **Product identifier**
- **Trade name:** Barium Chloride, ACS Grade
- **Product code:** S25187
- **CAS Number:**  
10361-37-2
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
AquaPhoenix Scientific, Inc.  
860 Gitts Run Road  
Hanover, PA 17331  
Phone: (717)632-1291  
Toll-Free: (866)632-1291  
info@aquaphoenixsci.com
- **Distributor:**  
Fisher Science Education  
6771 Silver Crest Road  
Nazareth, PA 18064  
(800) 955-1177
- **Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924 (North America)  
+1 (813)248-0585 (International)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
Acute Tox. 3 H301 Toxic if swallowed.  
Acute Tox. 4 H332 Harmful if inhaled.  
Eye Irrit. 2A H319 Causes serious eye irritation.
- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**  
  
GHS06 GHS07
- **Signal word:** Danger
- **Hazard statements:**  
H301 Toxic if swallowed.  
H332 Harmful if inhaled.  
H319 Causes serious eye irritation.
- **Precautionary statements:**

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P261	Avoid breathing dust.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	If swallowed: Immediately call a poison center/doctor.
P330	Rinse mouth.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a poison center/doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

## 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
10361-37-2 Barium Chloride
- **Additional information:**  
For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.  
For the wording of the listed Hazard Statements, refer to section 16.

## 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
In case of irregular breathing or respiratory arrest provide artificial respiration.  
Take affected persons out into the fresh air.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Brush off loose particles from skin.  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Remove contact lenses if worn.  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:**  
Nausea in case of ingestion.  
Causes eye irritation.  
Gastric or intestinal disorders when ingested.
- **Danger:**

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Harmful if inhaled.

Toxic if swallowed.

Danger of disturbed cardiac rhythm.

· **Indication of any immediate medical attention and special treatment needed:**

Medical supervision for at least 48 hours.

If necessary oxygen respiration treatment.

If medical advice is needed, have product container or label at hand.

## 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No relevant information available.

· **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

Wear protective clothing.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

· **Environmental precautions**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Methods and material for containment and cleaning up**

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

· **Handling**

· **Precautions for safe handling:**

Use only in well ventilated areas.

Prevent formation of dust.

Any deposit of dust which cannot be avoided must be regularly removed.

Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.

· **Information about protection against explosions and fires:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Do not store together with acids.
- **Further information about storage conditions:** Keep containers tightly sealed.
- **Specific end use(s)** No relevant information available.

## 8 Exposure controls/personal protection

### · Control parameters

- **Components with limit values that require monitoring at the workplace:**

#### 10361-37-2 barium chloride

PEL (USA)	Long-term value: 0.5 mg/m <sup>3</sup> as Ba
REL (USA)	Long-term value: 0.5 mg/m <sup>3</sup> as Ba
TLV (USA)	Long-term value: 0.5 mg/m <sup>3</sup> as Ba
EL (Canada)	Long-term value: 0.5 mg/m <sup>3</sup> as Ba
LMPE (Mexico)	Long-term value: 0.5 mg/m <sup>3</sup> A4; como Ba

- **Exposure controls**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the eyes and skin.
- **Engineering controls:** Provide adequate ventilation.
- **Breathing equipment:**  
Not required under normal conditions of use.  
Use suitable respiratory protective device when high concentrations are present.
- **Protection of hands:**



Protective gloves

- **Material of gloves**  
Butyl rubber, BR  
Fluorocarbon rubber (Viton)  
Natural rubber, NR  
Nitrile rubber, NBR  
Neoprene gloves  
Sensibilization by the components in the glove materials is possible.

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- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment**

No relevant information available.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **Appearance:**

**Form:** Solid

**Color:** Clear

- **Odor:** Odorless

- **Odor threshold:** Not determined.

- **pH-value:** Not applicable.

- **Melting point/Melting range:** Not determined.

- **Boiling point/Boiling range:** Not determined.

- **Flash point:** The product is not flammable.

- **Flammability (solid, gaseous):** Product is not flammable.

- **Auto-ignition temperature:** Not determined.

- **Decomposition temperature:** Not determined.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits**

**Lower:** Not determined.

**Upper:** Not determined.

- **Oxidizing properties:** Non-oxidizing.

- **Vapor pressure:** Not determined.

- **Density:**

**Relative density:** Not determined.

**Vapor density:** Not applicable.

**Evaporation rate:** Not applicable.

- **Solubility in / Miscibility with**

**Water:** Fully miscible.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity**

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<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>Other information</b>	No relevant information available.

## 10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**  
Toxic fumes may be released if heated above the decomposition point.  
Reacts with strong acids.  
Reacts with strong alkali.  
Reacts with organic substances.
- **Conditions to avoid**  
Excessive heat.  
Direct sunlight.
- **Incompatible materials** No relevant information available.
- **Hazardous decomposition products**  
Under fire conditions only:  
Toxic metal oxide smoke  
Chlorine

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**  
Toxic if swallowed.  
Harmful if inhaled.
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Causes eye irritation.
- **Sensitization:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **NTP (National Toxicology Program):**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

Substance is not listed.

· **Probable route(s) of exposure:**

Ingestion.  
Inhalation.  
Eye contact.

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Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):**

Toxic if swallowed.

Harmful if inhaled.

Irritating to eyes.

· **Repeated dose toxicity:** No relevant information available.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity** Toxic for aquatic organisms

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** No relevant information available.

· **Mobility in soil:** No relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Toxic for fish

· **Additional ecological information**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Toxic for aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**

· **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

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<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR/RID/ADN, IMDG, IATA</b></li> </ul>	UN1564
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR/RID/ADN, IMDG, IATA</b></li> </ul>	Barium compounds, n.o.s. (barium chloride) BARIUM COMPOUND, N.O.S. (barium chloride)
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	6.1 6.1
<ul style="list-style-type: none"> <li>· <b>ADR/RID/ADN</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	6.1 (T5) 6.1
<ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	6.1 6.1
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR/RID/ADN, IMDG, IATA</b></li> </ul>	III
<ul style="list-style-type: none"> <li>· <b>Environmental hazards</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Danger code (Kemler):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Segregation groups</b></li> </ul>	Warning: Toxic substances 60 F-A,S-A Heavy metals and their salts (including their organometallic compounds)
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>	Not applicable.

## 15 Regulatory information

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

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- **United States (USA)**

- **SARA**

- **Section 302 (extremely hazardous substances):**

Substance is not listed.

- **Section 355 (extremely hazardous substances):**

Substance is not listed.

- **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

- **TSCA (Toxic Substances Control Act)**

Substance is not listed.

- **Proposition 65 (California)**

- **Chemicals known to cause cancer:**

Substance is not listed.

- **Chemicals known to cause developmental toxicity for females:**

Substance is not listed.

- **Chemicals known to cause developmental toxicity for males:**

Substance is not listed.

- **Chemicals known to cause developmental toxicity:**

Substance is not listed.

- **EPA (Environmental Protection Agency):**

Substance is not listed.

- **IARC (International Agency for Research on Cancer):**

Substance is not listed.

- **Canadian Domestic Substances List (DSL) (Substances not listed.):**

Substance is listed.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulable, Toxic

vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health Administration

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

- **Sources**

Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))

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Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do))

Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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