



# SILVER FERN CHEMICAL

## Material Safety Data Sheet

### BARIUM CHLORIDE ANHYDROUS

#### SECTION 1: IDENTIFICATION

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**Product Name:** Barium Chloride Anhydrous

**CAS Number:** 10361-37-2 (Anhydrous)

**Chemical Formula:** BaCl<sub>2</sub>.2H<sub>2</sub>O

**Synonyms:** Barium Chloride

**Company**

Silver Fern Chemical, Inc.  
2226 Queen Anne Avenue North  
Suite #C  
Seattle WA 98109, USA

**Business Contact**

Customer Service: 206-282-3376  
[info@silverfernchemical.com](mailto:info@silverfernchemical.com)

**24 Hour Emergency Contact**

Infotrac 800-535-5053  
Outside USA & Canada 352-323-3500

#### SECTION 2: HAZARD IDENTIFICATION

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**Emergency Overview**

**DANGER! MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. AFFECTS HEART, RESPIRATORY SYSTEM, AND CENTRAL NERVOUS SYSTEM.**

Health Rating: 3 - Severe (Poison)

Flammability Rating: 0 - None

Reactivity Rating: 0 - None

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES

Storage Color Code: Blue (Health)

**Potential Health Effects**

**Inhalation:**

Irritates the respiratory tract. May produce sore throat, coughing and labored breathing. Other symptoms may parallel ingestion.

**Ingestion:**

Toxic! May cause severe gastroenteritis, including abdominal pain, vomiting and diarrhea. May cause tremors, faintness, paralysis of arms and legs, and slow or irregular heartbeat. Severe cases may produce collapse and death on respiratory



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failure. Estimated lethal dose in humans: 1 gram.

**Skin Contact:**

May cause irritation with redness and pain.

**Eye Contact:**

May cause irritation, redness, pain, or blurred vision.

**Chronic Exposure:**

No information found.

**Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance.

### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

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Ingredient	CAS No	Percent	Hazardous
Barium Chloride	10361-37-2	90 - 100%	Yes

### SECTION 4: FIRST AID MEASURES

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**Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Ingestion:**

Get medical attention immediately. Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. After vomiting, a mixture of 1 tablespoon of sodium or magnesium sulfate (Epsom salts) dissolved in 8 oz. of water to drink maybe indicated to precipitate the barium as the nontoxic and insoluble barium sulfate.

**Skin Contact:**

Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

**Note to Physician:**

Monitor patients with significant ingestion for respiratory, cardiovascular, and blood pressure status. Watch for cardiac arrhythmias, respiratory failure due to flaccid paralysis of respiratory muscles, pulmonary edema, vocal



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cord paralysis, severe hypertension, and late effect kidney failure. Acute barium poisoning results in hypokalemia. The administration of fluids containing dilute concentrations of potassium salts may be indicated.

#### SECTION 5: FIRE FIGHTING MEASURES

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**Fire:**

Not considered to be a fire hazard.

**Explosion:**

Not considered to be an explosion hazard.

**Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

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Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

#### SECTION 7: HANDLING AND STORAGE

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Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

#### SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

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**Airborne Exposure Limits:**

For Soluble Barium Compounds:

OSHA Permissible Exposure Limit (PEL):

0.5 mg (Ba)/m<sup>3</sup>

ACGIH Threshold Limit Value (TLV):

0.5 mg (Ba)/m<sup>3</sup> A4 - not classifiable as a human carcinogen



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**Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance:**

White solid.

**Odor:**

Odorless.

**Solubility:**

31 g/100 g water @ 0C (32F) (Anhydrous)

**Specific Gravity:**

3.86 @ 24C(75F) (Anhydrous)

**pH:**

No information found.

**% Volatiles by volume @ 21C (70F):**

0

**Boiling Point:**

1560C (2840F) (Anhydrous)



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**Melting Point:**

963C (1765F) (Anhydrous)

**Vapor Density (Air=1):**

No information found.

**Vapor Pressure (mm Hg):**

No information found.

**Evaporation Rate (BuAc=1):**

No information found.

#### SECTION 10: STABILITY AND REACTIVITY

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**Stability:**

Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

Oxides of the contained metal and halogen, possibly also free, or ionic halogen.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Bromine trifluoride; 2-furan percarboxylic acid. (Anhydrous)

**Conditions to Avoid:**

Incompatibles.

#### SECTION 11: TOXICOLOGICAL INFORMATION

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Barium chloride: Oral rat LD50: 118 mg/kg (anhydrous).

Investigated as a tumorigen (dihydrate).

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Barium Chloride (10361-37-2)	No	No	None

#### SECTION 12: ECOLOGICAL INFORMATION

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**Environmental Fate:**

This material is expected to significantly bio-accumulate.



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#### Environmental Toxicity:

No information found.

#### SECTION 13: DISPOSAL CONSIDERATIONS

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Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

#### SECTION 14: TRANSPORT INFORMATION

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##### Domestic (Land, D.O.T.)

**Proper Shipping Name:** BARIUM COMPOUND, N.O.S. (BARIUM CHLORIDE)

**Hazard Class:** 6.1

**UN/NA:** UN1564

**Packing Group:** III

**Information reported for product/size:** 400LB

##### International (Water, I.M.O.)

**Proper Shipping Name:** BARIUM COMPOUND, N.O.S. (BARIUM CHLORIDE)

**Hazard Class:** 6.1

**UN/NA:** UN1564

**Packing Group:** III

**Information reported for product/size:** 400LB

*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.*

#### SECTION 15: REGULATORY INFORMATION

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-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Barium Chloride (10361-37-2)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----



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Ingredient	--Canada--			
	Korea	DSL	NDSL	Phil.
Barium Chloride (10361-37-2)	Yes	Yes	No	Yes

Ingredient	-----\Federal, State & International Regulations - Part 1\-----			
	-SARA 302-	TPQ	List	SARA 313----- Chemical Catg.
Barium Chloride (10361-37-2)	No	No	No	Barium compo

Ingredient	-----\Federal, State & International Regulations - Part 2\-----		
	-RCRA- CERCLA	-TSCA- 261.33	8(d)
Barium Chloride (10361-37-2)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No  
 SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No  
 Reactivity: No (Mixture / Solid)

**Australian Hazchem Code:** 2Z

**Poison Schedule:** S6

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

**SECTION 16: OTHER INFORMATION**

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**NFPA Ratings:** Health: 3 Flammability: 0 Reactivity: 0

**Label Hazard Warning:**

DANGER! MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. AFFECTS HEART, RESPIRATORY SYSTEM, AND CENTRAL NERVOUS SYSTEM.

**Label Precautions:**

- Avoid contact with eyes, skin and clothing.
- Avoid breathing dust.
- Keep container closed.
- Use with adequate ventilation.
- Wash thoroughly after handling.

**Label First Aid:**



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If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. In all cases get medical attention immediately.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

No Changes.

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