

## Section 1 Chemical Product and Company Information

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**CHEMTREC 24 Hour Emergency**  
**Phone Number (800) 424-9300**  
For laboratory use only.  
Not for drug, food or household use.

**Product** BARIUM CHLORIDE, 0.1 MOLAR SOLUTION

**Synonyms** Barium Chloride, Aqueous Solution

## Section 2 Hazards Identification

**Signal word:** WARNING

**Pictograms:** GHS07

**Target organs:** Cardiovascular and Central nervous systems, Kidneys



**GHS Classification:**

Acute toxicity, oral (Category 4)

Acute toxicity, inhalation (Category 5)

**GHS Label information: Hazard statement:**

H302: Harmful if swallowed.

H333: May be harmful if inhaled.

**Precautionary statement:**

P260: Do not breathe mist/vapours/spray.

P264: Wash hands thoroughly after handling.

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

P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.

P304+P312: IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	97.56%	231-791-2
Barium chloride, dihydrate	10326-27-9	2.44%	233-788-1 (anhydrous)

## Section 4 First Aid Measures

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire Fighting Measures

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

## Section 6 Accidental Release Measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, well-ventilated area away from incompatible substances.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Barium and soluble compounds, as Ba	TWA: 0.5 mg/m <sup>3</sup> (A4)	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

<b>Appearance:</b> Clear, colorless liquid.	<b>Evaporation rate (Water = 1):</b> <1	<b>Partition coefficient:</b> Data not available
<b>Odor:</b> No odor.	<b>Flammability (solid/gas):</b> Data not available.	<b>Auto-ignition temperature:</b> Data not available
<b>Odor threshold:</b> Data not available.	<b>Explosion limits: Lower / Upper:</b> Data not available	<b>Decomposition temperature:</b> Data not available.
<b>pH:</b> Data not available.	<b>Vapor pressure (mm Hg):</b> 14 (water)	<b>Viscosity:</b> Data not available.
<b>Melting / Freezing point:</b> Approximately 0°C (32°F) (water)	<b>Vapor density (Air = 1):</b> 0.7 (water)	<b>Molecular formula:</b> Mixture
<b>Boiling point:</b> Approximately 100°C (212°F) (water)	<b>Relative density (Specific gravity):</b> Approximately 1.0 (water)	<b>Molecular weight:</b> Mixture
<b>Flash point:</b> Data not available	<b>Solubility(ies):</b> Complete in water.	

## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable **Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Excessive temperatures which cause evaporation.

**Incompatible materials:** Bromine trifluoride and 2-furan percarboxylic acid, violent reaction.

**Hazardous decomposition products:** Chlorine gas, hydrochloric acid and barium oxide, barium dust.

## Section 11 Toxicological Information

**Acute toxicity:** Oral-rat LD50: 118 mg/kg [Barium chloride]

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: Inhalation may cause irritation of the respiratory tract, sore throat, coughing and labored breathing.

Ingestion: Ingestion may cause severe gastritis, including abdominal pain, vomiting and diarrhea.

Skin: Contact with skin may cause redness and pain.

Eyes: Contact with eyes may cause redness, pain and blurred vision.

**Signs and symptoms of exposure:** May cause tremors, faintness, paralysis of arms and legs, and slow or irregular heartbeat. Severe cases may produce collapse and death on respiratory failure. Ingestion of 0.8 grams of Barium chloride may be fatal. Exercise appropriate procedures to minimize potential hazards.

**Additional information:** RTECS #: CQ8751000 [Barium chloride]

## Section 12 Ecological Information

**Toxicity to fish:** Leuciscus idus (fish, fresh water), LC50 = 870 mg/L [Barium chloride]

**Toxicity to daphnia and other aquatic invertebrates:** Daphnia magna (Crustacea), EC50 = 21.9 mg/L/48 hours [Barium chloride]

**Toxicity to algae:** Chlorella vulgaris (Algae), NOEC = 3.5 mg/L/4 months [Barium chloride]

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport Information (US DOT / CANADA TDG)

**UN/NA number:** Not applicable

**Shipping name:** Not Regulated

**Hazard class:** Not applicable

**Packing group:** Not applicable

**Reportable Quantity:** No


**Marine pollutant:** No

**Exceptions:** Not applicable

**2012 ERG Guide #** Not applicable

## Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERCLA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Barium chloride	Listed	Not listed	D005	Listed	Not listed	 D1B

## Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.