

# SAFETY DATA SHEET

Date Printed: 05/07/2024

Date Revised: 01/15/2022

## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Barium Chloride Solution

**Product Code:** BA-CL-04-SOL

**CAS Number:** 10361-37-2

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Hazards not otherwise classified No data available.

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS07

Signal word Warning

Hazard-determining components of labeling:

Barium chloride, anhydrous

Hazard statements

H302 Harmful if swallowed.

Precautionary statements

P264 Wash thoroughly after handling.

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

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell.

P330 Rinse mouth.

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

WHMIS classification Not controlled

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

2

0

1

Health (acute effects) = 2

Flammability = 0

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment:

PBT: N/A.

vPvB: N/A.

---

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures

Dangerous components:

10361-37-2 Barium chloride, anhydrous Acute Tox. 3, H301; Acute Tox. 4, H332 10.0%

Additional information None known.

Non-Hazardous Ingredients

7732-18-5 Water 90.0%

---

## SECTION 4. FIRST AID MEASURES

Description of first aid measures

If inhaled:

Supply fresh air. If not breathing, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

In case of skin contact:

Immediately wash with soap and water; rinse thoroughly.

Seek immediate medical advice.

In case of eye contact: Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed: Seek medical treatment.

Information for doctor

Most important symptoms and effects, both acute and delayed No information available.

Indication of any immediate medical attention and special treatment needed No information available.

---

## SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media Product is not flammable. Use fire-fighting measures that suit the

surrounding fire.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Barium oxide

Hydrogen chloride (HCl)

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

---

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions: Do not allow material to be released to the environment without official permits.

Methods and material for containment and cleanup:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards: No special measures required.

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.

---

## **SECTION 7. HANDLING AND STORAGE**

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure adequate ventilation.

Information about protection against explosions and fires: The product is not flammable

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Water reacts with many metals to give hydrogen, often violently. Water is also incompatible with many reactive organic and inorganic chemicals.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Specific end use(s) No information available.

---

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average

face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

10361-37-2 Barium chloride, anhydrous (10.0%)

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

Additional information: No data

Exposure controls

Personal protective equipment

Follow typical general protective and industrial hygiene measures for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Do not inhale dust / smoke / mist.

Breathing equipment: Use suitable respirator when high concentrations are present.

Recommended filter device for short term use:

Use a respirator with acid gas cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are

appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (EU).

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Penetration time of glove material (in minutes) No data available.

Eye protection: Safety glasses

Body protection: Protective work clothing.

---

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Appearance:

Form: Liquid

Color: Colorless

Odor: Odorless

Odor threshold: No data available.

pH: No data available.

Melting point/range: No data available.

Boiling point/range: No data available.

Sublimation temperature / start: No data available.

Flammability (solid, gas): No data available.

Ignition temperature: No data available.

Decomposition temperature: No data available.

Auto igniting: Product is not selfigniting.

Danger of explosion: No data available.

Explosion limits:

Lower: No data available.  
Upper: No data available.  
Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)  
Density: No data available.  
Relative density No data available.  
Vapor density No data available.  
Evaporation rate No data available.  
Solubility in / Miscibility with  
Water: Fully miscible  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: No data available.  
Kinematic: No data available.  
Solvent content:  
Organic solvents: 0.0 %  
Solids content: 10.0 %  
Other information No information available.

---

## SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available.  
Chemical stability Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions  
Water reacts violently with alkali metals.  
Water reacts with many metals to give hydrogen, often violently. Water is also incompatible with many reactive organic and inorganic chemicals.  
Conditions to avoid No information available.  
Incompatible materials: No data available.  
Hazardous decomposition products:  
Barium oxide  
Hydrogen chloride (HCl)

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects  
Acute toxicity:  
Harmful if swallowed.  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.  
LD/LC50 values that are relevant for classification:  
10361-37-2 Barium chloride, anhydrous  
Oral LD50 150 mg/kg (mouse)  
118 mg/kg (rat)  
Skin irritation or corrosion: May cause irritation  
Eye irritation or corrosion: May cause irritation  
Sensitization: No sensitizing effects known.  
Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.  
Carcinogenicity:

ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.

Specific target organ system toxicity - repeated exposure: N/A

Specific target organ system toxicity - single exposure: N/A

Aspiration hazard: N/A

Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

The product shows the following dangers according to internally approved calculation methods for preparations:

---

## SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulative potential: No information available.

Mobility in soil: No information available.

Additional ecological information:

General notes:

Do not allow material to be released to the environment without official permits.

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

Avoid transfer into the environment.

Results of PBT and vPvB assessment:

PBT: N/A.

vPvB: N/A.

Other adverse effects No information available.

---

## SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation: Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

---

## SECTION 14. TRANSPORT INFORMATION

UN-Number

DOT, ADN, IMDG, IATA N/A

UN proper shipping name

DOT, ADN, IMDG, IATA N/A

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class N/A

Packing group

DOT, IMDG, IATA N/A  
Environmental hazards:  
Marine pollutant (IMDG): No  
Special precautions for user N/A.  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A.  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT): No  
UN "Model Regulation": -

---

## SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture  
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)  
Hazard pictograms  
GHS07  
Signal word Warning  
Hazard-determining components of labeling:  
Barium chloride, anhydrous  
Hazard statements  
H302 Harmful if swallowed.  
Precautionary statements  
P264 Wash thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell.  
P330 Rinse mouth.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.  
National regulations  
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.  
All components of this product are listed on the Canadian Domestic Substances List (DSL).  
SARA Section 313 (specific toxic chemical listings)  
10361-37-2 Barium chloride, anhydrous 10.0%  
California Proposition 65  
Prop 65 - Chemicals known to cause cancer  
None of the ingredients are listed.  
Prop 65 - Developmental toxicity  
None of the ingredients are listed.  
Prop 65 - Developmental toxicity, female  
None of the ingredients are listed.  
Prop 65 - Developmental toxicity, male  
None of the ingredients are listed.  
Information about limitation of use: For use only by technically qualified individuals.  
Other regulations, limitations and prohibitive regulations  
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.  
None of the ingredients are listed.  
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.  
None of the ingredients is listed.  
Annex XIV of the REACH Regulations (requiring Authorisation for use)

None of the ingredients is listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

---

## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.