

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Barium Chloride Solution R1 (61 g/L)

Product Number: 847

Other Identifying Product Numbers: 847-16, 847-4

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company

Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

| Hazard Class | Category | Hazard Statements | Precautionary Statements: |
|-----------------------|------------|-------------------|-----------------------------------|
| Acute Toxicity - Oral | Category 4 | H302 | P264, P270, P301+P312, P330, P501 |

2.2. GHS Label Elements

Pictograms:



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Signal Word: **Warning**

Hazard Statements:

| Hazard Number | Hazard Statement |
|---------------|-----------------------|
| H302 | Harmful if swallowed. |

Precautionary Statements:

| Precautionary Number | Precautionary Statement |
|----------------------|---|
| P264 | Wash arms, hands and face thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P301+P312 | IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. |
| P330 | Rinse mouth. |
| P501 | Dispose of contents in accordance with local, state, federal and international regulations. |

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

| Chemical Name | Formula | Molecular Weight | CAS Number | Weight% |
|---------------------------|--------------------------------------|------------------|------------|---------|
| Water | H ₂ O | 18.01 g/mol | 7732-18-5 | 94.19 |
| Barium Chloride Dihydrate | BaCl ₂ ·2H ₂ O | 244.26 g/mol | 10326-27-9 | 5.81 |

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: May cause irritation, redness, pain, and tearing.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: May cause irritation, redness, and pain.

Ingestion: IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Dilute immediately with water or milk. Induce vomiting. Call a physician.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Harmful if swallowed. Danger! May be fatal if swallowed. May cause irritation to the skin, eyes and respiratory system. Affects heart, respiratory system and central nervous system. Water and stomach acids solubilize barium salts and can cause poisoning. Wash areas of contact with plenty of water. If ingested, dilute with water, induce vomiting, then call a physician. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness, and pain.

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4.3. Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute immediately with water or milk. Induce vomiting. Call a physician.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment for Firefighters

Use protective clothing and NIOSH-approved breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

6.2. Cleanup and Containment Methods and Materials

Do not flush to sewer. Absorb with suitable material. Containerize for disposal with a hazardous waste disposal facility. Dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

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SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

| Chemical Name | Limit Type | Country | Exposure Limit | Information Source |
|--|------------|---------|---|--|
| Barium Chloride Dihydrate (10326-27- ξ TLV-TWA | | USA | "0.5 mg/m ³ TWA (as Ba)" As Barium soluble compounds [RR-00049-7] | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Barium Chloride Dihydrate (10326-27- ξ TWA | | USA | "0.5 mg/m ³ TWA (regulated under CAS 7440-39-3, as Ba)" As Barium, soluble compounds [RR-00049-7] | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs) |
| Barium Chloride Dihydrate (10326-27- ξ TLV-TWA | | USA | "0.5 mg/m ³ TWA (as Ba)" As Barium soluble compounds [RR-00049-7] | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
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| Barium Chloride Dihydrate (10326-27- ξ TWA | | USA | 0.5 mg/m ³ TWA (regulated under CAS 7440-39-3, as Ba) | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs) |

8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

8.3. Personal Protective Equipment

Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.



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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: approximately 5 - 7

Melting/Freezing Point: Approximately 0°C

Initial Boiling Point/Range: Approximately 101°C - Approximately 101°C

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.05

Solubility: Miscible

Partition Coefficient: Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Boron Trifluoride, Furan-2-peroxycarboxylic acid.

10.4. Hazardous Decomposition Products

Will not occur.



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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Harmful if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50, Oral, Rat: (Barium Chloride, anhydrous) 118 mg/kg, details of toxic effects not reported other than lethal dose value. Investigated as a mutagen and reproductive effector.

Skin Corrosion and Irritation:

Not applicable.

Serious Eye Damage and Irritation:

Not applicable.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

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SECTION 12: Ecological Information

12.1. Ecotoxicity

Not applicable.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Sizes: 120 mL, 500 mL

UN Number: UN3287

Proper Shipping Name: Toxic Liquid, Inorganic, n.o.s. (Barium Chloride)

Hazard Class: 6.1

Packing Group: III

Hazard Label(s):





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14.2. Transportation by Air - International Air Transport Association (IATA)

Sizes: 120 mL, 500 mL

UN Number: UN3287

Proper Shipping Name: Toxic Liquid, Inorganic, n.o.s. (Barium Chloride)

Hazard Class: 6.1

Packing Group: III

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 120 mL, 500 mL

UN Number: UN3287

Proper Shipping Name: TOXIC LIQUID, INORGANIC, N.O.S. (barium chloride)

Hazard Class: 6.1

Packing Group: III

Hazard Label(s):



SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Not listed.

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15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Barium Chloride Dihydrate (CAS # 10326-27-9): "1.0 % de minimis concentration (includes any unique chemical substance that contains Barium as part of that chemical's infrastructure except for Barium sulfate CAS 7727-43-7, listed under Chemical Category N040)" As Barium compounds [RR-00555-0]

Barium Chloride Dihydrate (CAS # 10326-27-9): 1.0 % de minimis concentration (includes any unique chemical substance that contains Barium as part of that chemical's infrastructure except for Barium sulfate CAS 7727-43-7, listed under Chemical Category N040)

15.5. Massachusetts Right-to-Know Substance List

Not listed.

15.6. Pennsylvania Right-to-Know Hazardous Substances

Barium Chloride Dihydrate (CAS # 10326-27-9): "Environmental hazard" As Barium compounds [RR-00555-0]

Barium Chloride Dihydrate (CAS # 10326-27-9): "Present" As Barium compounds [RR-00555-0]

Barium Chloride Dihydrate (CAS # 10326-27-9): Environmental hazard

Barium Chloride Dihydrate (CAS # 10326-27-9): Present

Water (CAS # 7732-18-5): "Present" As Ethyl alcohol and water [RR-00802-6]

Water (CAS # 7732-18-5): Present

15.7. New Jersey Worker and Community Right-to-Know Components

Barium Chloride Dihydrate (CAS # 10326-27-9): "SN 2146 500 lb TPQ (except Barium sulfate CAS number 7727-43-7, Category Code N040. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Barium compounds [RR-00555-0]

Barium Chloride Dihydrate (CAS # 10326-27-9): "sn 2146" As Barium compounds [RR-00555-0]

Barium Chloride Dihydrate (CAS # 10326-27-9): sn 2146

Barium Chloride Dihydrate (CAS # 10326-27-9): SN 2146 500 lb TPQ (except Barium sulfate CAS number 7727-43-7, Category Code N040. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

15.8. California Proposition 65

Not listed.

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Barium Chloride Dihydrate (CAS # 10326-27-9): Present (DSL)

Water (CAS # 7732-18-5): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Barium Chloride Dihydrate (CAS # 10326-27-9): Present (ACTIVE)

Water (CAS # 7732-18-5): Present (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Barium Chloride Dihydrate (CAS # 10326-27-9): 233-788-1

Water (CAS # 7732-18-5): 231-791-2

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SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Harmful if swallowed.

Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

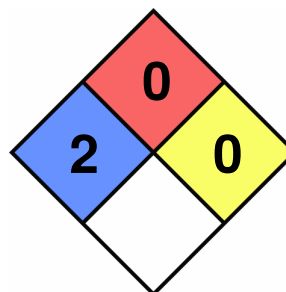
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 2
Flammability: 0
Reactivity: 0
Special Hazard:



16.4. Document Revision

Last Revision Date: 2023-09-11

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.