



# SAFETY DATA SHEET

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Preparation Date: 01/01/2019

Revision Date: N/A

Revision Number: 1

## SECTION 1: Identification

### 1.1. Product Identifier

Trade Name or Designation: Barium Chloride 32% Solution

Product Number: PS18019

### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

### 1.3. Details of the Supplier of the Safety Data Sheet

**Dawn Scientific Inc**

121 Liberty Street, Metuchen, NJ, 08840

Tel : 732-902-6300 | Fax : 973-802-1005

sales@dawnscientific.com | www.dawnscientific.com

### 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
Acute Toxicity - Inhalation	Category 4	H332	P261, P271, P304+P340, P312
Skin Corrosion / Irritation	Category 2	H315	P264, P280, P302+P352, P321, P332+P313, P362
Eye Damage / Irritation	Category 2A	H319	P264, P280, P305+P351+P338, P337+P313
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 1	H370	P260, P264, P270, P307+P311, P321, P405, P501
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 1	H372	P260, P264, P270, P314, P501
Hazardous to the Aquatic Environment (Acute)	Category 3	H402	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 3	H412	P273, P501

### 2.2. GHS Label Elements

Pictograms:



Signal Word:

**Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P260	Do not breathe fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves and eye protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+P311	IF exposed: Call a POISON CENTER or physician.
P314	Get medical attention if you feel unwell.
P321	Specific treatment (Wash areas of contact with water).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical attention.
P337+P313	If eye irritation persists: Get medical attention.
P362	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
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 <sub>2</sub> O	18.01 g/mol	7732-18-5	67-68
Barium Chloride Dihydrate	BaCl <sub>2</sub> ·2H <sub>2</sub> O	244.26 g/mol	10326-27-9	32-33

SECTION 4: First-Aid Measures

4.1. General First Aid Information

- Eye Contact:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.
- Inhalation:

Not expected to require first aid. If necessary, remove to fresh air.
- Skin Contact:

IF ON SKIN: Wash with plenty of soap and water. 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. Causes skin irritation. Causes serious eye irritation. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. 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.

## 4.3. Medical Attention or Special Treatment Needed

Specific treatment (Wash areas of contact with water). 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 protective gloves and eye protection.

## 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

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

# SECTION 8: Exposure Controls / Personal Protection

## 8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Barium Chloride Dihydrate (10326-27-9)	TWA	USA	0.5 mg/m <sup>3</sup> TWA (as Ba)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Barium Chloride Dihydrate (10326-27-9)	TLV-TWA	USA	0.5 mg/m <sup>3</sup> TWA (as Ba)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

## 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:	Wear protective gloves and eye protection. Chemical resistant gloves.
Eye Protection:	Wear protective gloves and eye protection. Safety glasses or goggles.

## 8.3. Personal Protective Equipment

Wear protective gloves and eye protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

# 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:	1.11
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.

## 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:

Causes skin irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF ON SKIN:

Wash with plenty of soap and water. Specific treatment (Wash areas of contact with water). If skin irritation occurs: Get medical attention.

Take off contaminated clothing and wash it before reuse.

#### Serious Eye Damage and Irritation:

Causes serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF IN

EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

#### 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:

Causes damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

#### Specific Target Organ Toxicity from Repeated Exposure:

Causes damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

#### Aspiration Hazard:

Not applicable.

#### Additional Toxicology Information:

Data not available.

## 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: 20 L

UN Number: UN3287

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

Hazard Class: 6.1

Packing Group: III

Hazard Label(s):



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

Sizes: 20 L

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: 20 L

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.

### 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 (does not include Barium sulfate CAS 7727-43-7, 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

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

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

Barium Chloride Dihydrate (CAS # 10326-27-9): SN 2146 500 lb TPQ (except Barium sulfate, Category Code N040.)

### 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

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

### 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

Water (CAS # 7732-18-5): 232-148-9

## SECTION 16: Other Information

### 16.1. Full Text of Hazard Statements and Precautionary Statements

Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves and eye protection.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water). Rinse mouth. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing and wash it before reuse.

Store locked up.

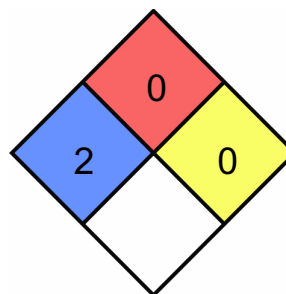
Dispose of contents in accordance with local, state, federal and international regulations.

### 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: 01/01/2019

## 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 Dawn Scientific Inc assumes no legal responsibility or liability whatsoever resulting from its use.