

## MATERIAL SAFETY DATA SHEET

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Version 1.5

## Section 1 - Product and Company Information

Product Name BARIUM CHLORIDE DIHYDRATE, >=99%,  
A.C.S.REAGENT  
Product Number 217565  
Brand SIAL  
Company Sigma-Aldrich  
Address 3050 Spruce Street  
SAINT LOUIS MO 63103 US  
Technical Phone: 800-325-5832  
Fax: 800-325-5052  
Emergency Phone: 314-776-6555

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
BARIUM CHLORIDE DIHYDRATE	10326-27-9	Yes
Formula	BaCl <sub>2</sub> .2H <sub>2</sub> O	
Synonyms	Barium dichloride dihydrate * NCI-C61074	
RTECS Number:	CQ8751000	

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Toxic.

Harmful by inhalation. Toxic if swallowed. Irritating to eyes, respiratory system and skin.

Target organ(s): Heart. Nerves. Kidneys. G.I. System.

## HMIS RATING

HEALTH: 2\*

FLAMMABILITY: 0

REACTIVITY: 0

## NFPA RATING

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 0

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

## Section 4 - First Aid Measures

## ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

## INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give

artificial respiration. If breathing is difficult, give oxygen.

#### DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

#### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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### Section 5 - Fire Fighting Measures

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#### FLASH POINT

N/A

#### AUTOIGNITION TEMP

N/A

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

#### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

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### Section 6 - Accidental Release Measures

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#### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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### Section 7 - Handling and Storage

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#### HANDLING

User Exposure: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Suitable: Keep tightly closed.

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### Section 8 - Exposure Controls / PPE

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#### ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved

under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

#### GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

#### EXPOSURE LIMITS, RTECS

Country	Source	Type	Value
USA	ACGIH	TWA	0.5 MG(BA)/M3
USA	MSHA Standard-air	TWA	0.5 MG(BA)/M3
USA	OSHA.	PEL	8H TWA 0.5 MG(BA)/M3

New Zealand OEL

Remarks: check ACGIH TLV

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#### Section 9 - Physical/Chemical Properties

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Appearance

Color: White

Form: Fine crystals

Property

Value

At Temperature or Pressure

Molecular Weight 244.28 AMU

pH 5.0 - 8.0

BP/BP Range N/A

MP/MP Range N/A

Freezing Point N/A

Vapor Pressure N/A

Vapor Density N/A

Saturated Vapor Conc. N/A

SG/Density 3.1 g/cm3

Bulk Density N/A

Odor Threshold N/A

Volatile% N/A

VOC Content N/A

Water Content N/A

Solvent Content N/A

Evaporation Rate N/A

Viscosity N/A

Surface Tension N/A

Partition Coefficient N/A

Decomposition Temp. N/A

Flash Point N/A

Explosion Limits N/A

Flammability N/A

Autoignition Temp N/A

Refractive Index N/A

Optical Rotation N/A

Miscellaneous Data N/A

Solubility N/A

N/A = not available

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#### Section 10 - Stability and Reactivity

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##### STABILITY

Stable: Stable.  
Materials to Avoid: Strong oxidizing agents.

#### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Hydrogen chloride gas.

#### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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### Section 11 - Toxicological Information

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#### ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin.  
Eye Contact: Causes eye irritation.  
Inhalation: Harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.  
Ingestion: Toxic if swallowed.

#### TARGET ORGAN(S) OR SYSTEM(S)

Heart. Nerves. Liver. Spleen. Bone marrow. G.I. System. Kidneys.

#### SIGNS AND SYMPTOMS OF EXPOSURE

Exposure can cause: Stomach pains, vomiting, diarrhea. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

#### TOXICITY DATA

Intraperitoneal  
Mouse  
51 MG/KG  
LD50

#### CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is probably not carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

#### NTP CARCINOGEN LIST

Rating: No evidence.  
Species: Mouse/rat  
Route: Drinking

#### ACGIH CARCINOGEN LIST

Rating: A4

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### Section 12 - Ecological Information

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No data available.

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### Section 13 - Disposal Considerations

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#### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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## Section 14 - Transport Information

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### DOT

Proper Shipping Name: Barium compounds, n.o.s.  
UN#: 1564  
Class: 6.1  
Packing Group: Packing Group III  
Hazard Label: Toxic Substance  
PIH: Not PIH

### IATA

Proper Shipping Name: Barium compound, n.o.s.  
IATA UN Number: 1564  
Hazard Class: 6.1  
Packing Group: III

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## Section 15 - Regulatory Information

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### EU DIRECTIVES CLASSIFICATION

Symbol of Danger: T  
Indication of Danger: Toxic.  
R: 20-25  
Risk Statements: Harmful by inhalation. Toxic if swallowed.  
S: 45  
Safety Statements: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Toxic.  
Risk Statements: Harmful by inhalation. Toxic if swallowed.  
Irritating to eyes, respiratory system and skin.  
Safety Statements: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Do not breathe dust. Wear suitable protective clothing, gloves, and eye/face protection.  
US Statements: Target organ(s): Heart. Nerves. Kidneys. G.I. System.

### UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes  
DEMINIMIS: 1 %  
NOTES: This product is subject to SARA section 313 reporting requirements - barium compounds.

### CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.  
DSL: No  
NDSL: No

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## Section 16 - Other Information

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### DISCLAIMER

For R&D use only. Not for drug, household or other uses.

### WARRANTY

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

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