SECTION 1 : Identification of the substance/mixture and of the supplier

Product name: Barium Chloride Dihydrate

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25187A

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:

Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

Toxic
Acute toxicity (oral, dermal, inhalation), category 3

Irritant
Acute toxicity (oral, dermal, inhalation), category 4

AcTox Oral 3
AcTox Inhaln. 4

Signal word : Danger

Hazard statements:
Toxic if swallowed
Harmful if inhaled

Precautionary statements:
If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Avoid breathing dust/fume/gas/mist/vapours/spray
Wash skin thoroughly after handling
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Specific treatment (see supplemental first aid instructions on this label)
Call a POISON CENTER or doctor/physician if you feel unwell
Store locked up

Created by Global Safety Management, Inc. -Tel: 1-813-435-5161 - www.gsmsds.com
Dispose of contents and container as instructed in Section 13

Other Non-GHS Classification:

<table>
<thead>
<tr>
<th>WHMIS</th>
<th>D1B</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA/HMIS</td>
<td></td>
</tr>
</tbody>
</table>

NFPA SCALE (0-4)

| Health | 3 |
| Flammability | 1 |
| Physical Hazard | 0 |
| Personal Protection | X |

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredients:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 10326-27-9</td>
</tr>
</tbody>
</table>

Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

**After inhalation:** Loosen clothing as necessary and position individual in a comfortable position. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Seek medical attention. Do NOT use mouth-to-mouth resuscitation.

**After skin contact:** Wash affected area with soap and water. Rinse exposed skin with water for 20 minutes. Enter emergency shower rinsing while removing contaminated clothing and shoes. Transport victim to the hospital.

**After eye contact:** Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Occasionally lift the upper and lower eyelids while rinsing. Immediately seek medical attention.

**After swallowing:** Rinse mouth thoroughly. Do not induce vomiting. Do not perform mouth-to-mouth on an unconscious person. Never give anything by mouth to an unconscious person. Call Poison Control Center or a physician immediately.

Most important symptoms and effects, both acute and delayed:


Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician.
SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. Decomposes at high temperatures, resulting in toxic and corrosive products.

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing.

Additional information (precautions): Normal ventilation is adequate.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure that air-handling systems are operational. Ensure adequate ventilation.

Environmental precautions:

Prevent from reaching drains, sewer, or waterway. Should not be released into environment.

Methods and material for containment and cleaning up:

Wear protective eyeware, gloves, and clothing. Refer to Section 8. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid ingestion and inhalation.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

SECTION 8 : Exposure controls/personal protection

Control Parameters:

10326-27-9, Barium chloride dihydrate, TWA 0.5 mg/m³ USA. NIOSH
10326-27-9, Barium chloride dihydrate, WA 0.5 mg/m³ USA. OSHA
10326-27-9, Barium chloride dihydrate, TWA 0.5 mg/m³ USA. ACGIH

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Normal ventilation is adequate.
Barium Chloride Dihydrate

Protection of skin: Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection: Safety glasses with side shields or goggles. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

General hygienic measures: Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Remove contaminated clothing and shoes. Before wearing wash contaminated clothing. Perform routine housekeeping.

SECTION 9 : Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (physical state, color)</td>
<td>White solid</td>
</tr>
<tr>
<td>Explosion limit lower</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Explosion limit upper</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not Determined</td>
</tr>
<tr>
<td>pH-value</td>
<td>5.0 - 8.0 at 50 g/l at 25 °C</td>
</tr>
<tr>
<td>Relative density</td>
<td>3.100 g/cm³</td>
</tr>
<tr>
<td>Melting/Freezing point</td>
<td>962 °C</td>
</tr>
<tr>
<td>Solubilities</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>1560 °C</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flash point (closed cup)</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Auto/Self-ignition temperature</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 100 °C</td>
</tr>
<tr>
<td>Flammability (solid, gaseous)</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td>a. Kinematic: Not Determined</td>
</tr>
<tr>
<td></td>
<td>b. Dynamic: Not Determined</td>
</tr>
<tr>
<td>Density</td>
<td>Not Determined</td>
</tr>
</tbody>
</table>

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions: None under normal processing
Conditions to avoid: Excessive heat. Incompatible materials. Dust formation.
Incompatible materials: Oxidizing Agents
Hazardous decomposition products: Hydrogen chloride gas, chlorine.

SECTION 11 : Toxicological information

Acute Toxicity:

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50 oral - rat</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>118 mg/kg</td>
<td>10326-27-9</td>
</tr>
</tbody>
</table>
### Chronic Toxicity
No additional information.

### Corrosion Irritation
No additional information.

### Sensitization
**Irritation:** Irritating to eyes and skin

### Single Target Organ (STOT)
No additional information.

### Numerical Measures
No additional information.

### Carcinogenicity
No additional information.

### Mutagenicity
No additional information.

### Reproductive Toxicity
No additional information.

## SECTION 12: Ecological information

**Ecotoxicity Persistence and degradability:** Readily degradable in the environment.

**Bioaccumulative potential:**

**Mobility in soil:**

**Other adverse effects:**

## SECTION 13: Disposal considerations

**Waste disposal recommendations:**

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Product or containers must not be disposed together with household garbage. Contact a licensed professional waste disposal service to dispose of this material. Consult federal, state, provincial, and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Dilute with water and flush to sewer.

## SECTION 14: Transport information

**UN-Number**

1564

**UN proper shipping name**

Barium Compounds, N.O.S.

**Transport hazard class(es)**

- **Class:** 6.1 Toxic substances
- **Packing group:** III
- **Environmental hazard:**
- **Transport in bulk:**
- **Special precautions for user:**

## SECTION 15: Regulatory information

**United States (USA)**

- **SARA Section 311/312 (Specific toxic chemical listings):**
  - Acute, Chronic
SARA Section 313 (Specific toxic chemical listings):
10326-27-9 Barium chloride dihydrate

RCRA (hazardous waste code):
10326-27-9, Not applicable

TSCA (Toxic Substances Control Act):
All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):
None of the ingredients is listed

Proposition 65 (California):

Chemicals known to cause cancer:
None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed

Chemicals known to cause developmental toxicity:
None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):
All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):
None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):
None of the ingredients is listed

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
Barium Chloride Dihydrate

NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)

Effective date: 12.21.2014
Last updated: 03.23.2015