SECTION 1: Identification

1.1. Identification

Product name: BARIUM ACETATE
Product code: CXBA010
Product form: Substance
Physical state: Solid
Formula: C4H6BaO4
Synonyms: BARIUM DIACETATE
ACETIC ACID, BARIUM SALT
Chemical family: METAL COMPOUND

1.2. Recommended use and restrictions on use

Recommended use: Chemical intermediate

1.3. Supplier

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
Acute toxicity (oral) Category 4 H302 - Harmful if swallowed
Acute toxicity (inhalation:dust,mist) Category 4 H332 - Harmful if inhaled
Serious eye damage/eye irritation Category 2A H319 - Causes serious eye irritation
Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling
Hazard pictograms (GHS US): 

Signal word (GHS US): Warning
Hazard statements (GHS US): H302+H332 - Harmful if swallowed or if inhaled
H319 - Causes serious eye irritation
Precautionary statements (GHS US): P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P261 - Avoid breathing dust.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P330 - Rinse mouth.
P301+P312 - If swallowed: Call a doctor if you feel unwell
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: Get medical advice/attention.
P312 - Call a doctor if you feel unwell
P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Hazards not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable
SECTION 3: Composition/Information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium acetate</td>
<td>(CAS-No.) 543-80-6</td>
<td>95 - 100</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (Inhalation), H332</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of soap and water. Get medical advice/attention.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation: Harmful if inhaled. May cause irritation to the respiratory tract. Barium vapors and dust have moderate toxicity.

Symptoms/effects after skin contact: May cause skin irritation.

Symptoms/effects after eye contact: Causes serious eye irritation.

Symptoms/effects after ingestion: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard. In general, soluble barium salts, such as the chloride and sulfide, have been reported as poisonous when taken orally. The insoluble salt, barium sulfate, is used in radiography and is not acutely toxic.

Chronic symptoms: May damage central nervous system.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


Unsuitable extinguishing media: Do not use straight streams.

5.2. Specific hazards arising from the chemical

Fire hazard: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions: Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment: Wear protective equipment as described in Section 8.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Notify authorities if product enters sewers or public waters. Prevent entry to sewers and public waters.
6.3. Methods and material for containment and cleaning up
For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust. Avoid dust formation. Use only outdoors or in a well-ventilated area.
Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions : Keep container tightly closed. Store locked up.
Storage area : Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
<table>
<thead>
<tr>
<th>Barium acetate (543-80-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls
Appropriate engineering controls : Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective equipment
Personal protective equipment:
Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection: Neoprene or nitrile rubber gloves

Eye protection: Chemical goggles. Contact lenses should not be worn

Skin and body protection: Wear suitable protective clothing

Respiratory protection: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
| Physical state | Solid |
| Appearance | Solid. |
| Molecular mass | 255.43 g/mol |
| Color | White to off-white. |
| Odor | No data available |
| Odor threshold | No data available |
| Refractive index | No data available |
| pH | No data available |
| Relative evaporation rate (butyl acetate=1) | No data available |
| Melting point | No data available |
| Freezing point | No data available |
| Boiling point | No data available |
| Flash point | No data available |
| Auto-ignition temperature | No data available |
BARIUM ACETATE
Safety Data Sheet

Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: No data available
Relative vapor density at 20 °C: No data available
Relative density: 2.47
% Volatiles: < 1%
Solubility: Soluble in water. Water: 730 g/l @ 22°C
Log Pow: No data available
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidizing properties: No data available
Explosion limits: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Material decomposes slowly in contact with air by reaction with water and carbon dioxide.

10.4. Conditions to avoid
No additional information available

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Barium oxide fumes. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Not classified

BARIUM ACETATE (543-80-6)

| ATE US (oral) | 921 mg/kg body weight |
| ATE US (dust, mist) | 1.5 mg/l/4h |

Barium acetate (543-80-6)

| LD50 oral rat | 921 mg/kg |
| ATE US (oral) | 921 mg/kg body weight |
| ATE US (gases) | 4500 ppmV/4h |
| ATE US (vapors) | 11 mg/l/4h |
| ATE US (dust, mist) | 1.5 mg/l/4h |

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Reproductive toxicity: Not classified
Specific target organ toxicity – single exposure: Not classified
Specific target organ toxicity – repeated exposure: Not classified
BARIUM ACETATE
Safety Data Sheet

<table>
<thead>
<tr>
<th>Aspiration hazard</th>
<th>: Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms/effects after inhalation</td>
<td>: Harmful if inhaled. May cause irritation to the respiratory tract. Barium vapors and dust have moderate toxicity.</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>: May cause skin irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>: Causes serious eye irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after ingestion</td>
<td>: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard. In general, soluble barium salts, such as the chloride and sulfide, have been reported as poisonous when taken orally. The insoluble salt, barium sulfate, is used in radiography and is not acutely toxic.</td>
</tr>
<tr>
<td>Chronic symptoms</td>
<td>: May damage central nervous system.</td>
</tr>
<tr>
<td>Reason for classification</td>
<td>: Expert judgment</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological information**

| 12.1. Toxicity | No additional information available |
| 12.2. Persistence and degradability | No additional information available |
| 12.3. Bioaccumulative potential | No additional information available |
| 12.4. Mobility in soil | No additional information available |
| 12.5. Other adverse effects | Effect on the ozone layer : No additional information available |

**SECTION 13: Disposal considerations**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Product/Packaging disposal recommendations</td>
<td>Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.</td>
</tr>
<tr>
<td>Ecology - waste materials</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

**SECTION 14: Transport information**

| 14.1. UN number | Not regulated for transport. |
| 14.2. UN proper shipping name | Not applicable |
| 14.3. Additional information | Other information : No supplementary information available. |

**Transport by sea**
No additional information available

**Air transport**
No additional information available

**SECTION 15: Regulatory information**

<table>
<thead>
<tr>
<th>15.1. US Federal regulations</th>
<th><strong>Barium acetate (543-80-6)</strong>&lt;br&gt;Listed on the United States TSCA (Toxic Substances Control Act) inventory</th>
</tr>
</thead>
</table>

| 15.2. International regulations | **CANADA**
**Barium acetate (543-80-6)**<br>Listed on the Canadian DSL (Domestic Substances List) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WHMIS Classification</td>
<td>Uncontrolled product according to WHMIS classification criteria</td>
</tr>
</tbody>
</table>

EU-Regulations
Barium acetate (543-80-6)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Barium acetate (543-80-6)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Poisonous and Delterious Substances Control Law
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSO (Mexican National Inventory of Chemical Substances)

15.3. US State regulations
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases:

| H302 | Harmful if swallowed |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |

Abbreviations and acronyms:

- Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating

Health: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 01/09/2017 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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