MATERIAL SAFETY DATA SHEET
GENIUM PUBLISHING CORPORATION
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From Genium's MSDS Collection, to be used as a reference.

SECTION 1. MATERIAL IDENTIFICATION

MATERIAL NAME: BARIUM CHLORIDE
Other Designations: Barium Dichloride, BaCl₂; CAS #: 10361-37-2.

Manufacturer: Available from several suppliers, including:
Ashland Chemical Company
PO Box 2219
Columbus, OH 43216
(614) 880-3331

J.T. Baker Chemical Company
222 Red School Lane
Phillipsburg, NJ 08865
(201) 859-2151

SECTION 2. INGREDIENTS AND HAZARDS

Barium Chloride

* Current ACGIH (1984-85) TLV and OSHA PEL for soluble barium compounds.

<table>
<thead>
<tr>
<th>%</th>
<th>HAZARD DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ca 99%</td>
<td>8 hr TWA 0.5 mg/m³ (as Ba)*</td>
</tr>
<tr>
<td></td>
<td>Human, oral:</td>
</tr>
<tr>
<td></td>
<td>LDLo: 11.4 mg/kg</td>
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<tr>
<td></td>
<td>Rat, oral:</td>
</tr>
<tr>
<td></td>
<td>LD50: 116 mg/kg</td>
</tr>
</tbody>
</table>

SECTION 3. PHYSICAL DATA

Melting Point, deg C - 963
Boiling Point, deg C - 1560
Solubility in Water, g/100g @ 20°C - 36
Specific Gravity (H₂O = 1) - 3.86
Molecular weight - 208.3

Appearance & Odor: Colorless crystals or white powder. No odor.

SECTION 4. FIRE AND EXPLOSION DATA

Flammable Limits in Air

<table>
<thead>
<tr>
<th>Flash Point and Method</th>
<th>Autoignition Temp.</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-flammable</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Extinguishing Media: Use extinguishing agents that are appropriate for the surrounding fire.

Firefighters should wear self-contained breathing apparatus when fighting fires involving this material.

SECTION 5. REACTIVITY DATA

Barium Chloride is stable at room temperature. It does not polymerize.
### SECTION 6. HEALTH HAZARD INFORMATION

| TLV | 0.5 mg/m³, as Ba |

Barium Chloride may cause irritation of the eyes, nose, throat, and bronchial tubes. It is highly toxic by ingestion. Acute effects of ingestion include abdominal pain, vomiting, diarrhea, convulsions, muscular spasms and hemorrhage of the stomach, intestines and kidneys. The lethal dose for man is approximately 1 gram BaCl₂.

**FIRST AID:**

- **EYE CONTACT:** Flush eyes, including under the eyelids, with running water for at least 15 minutes. Seek medical attention.
- **SKIN CONTACT:** Thoroughly wash contaminated area with soap and water.
- **INGESTION:** If person is conscious, induce vomiting. If readily available, give one tablespoon of epsom salt (MgSO₄) in a glass of water (to precipitate barium as the insoluble sulfate). Seek medical attention (In-plant, Paramedics, Community). Never give anything by mouth to an unconscious person.
- **INHALATION:** Remove person to fresh air.

**Physician’s Note:** Acute barium poisoning gives a rapid decrease in blood potassium level. Administration of appropriate potassium salts has been recommended.

### SECTION 7. SPILL, LEAK AND DISPOSAL PROCEDURES

Safety personnel should be notified of any large spills. Clean-up personnel should wear protective equipment to prevent eye/skin contact and dust inhalation. Vacuum or carefully scoop material into an appropriate container for recovery or disposal. Minimize dust generation. Dampen with water prior to clean-up if surface area is large.

**DISPOSAL:** Reclaim for salvage or reuse. Consideration should be given to returning scrap material to supplier for reprocessing. Unsalvageable waste may be disposed of in sealed containers in an approved secured landfill. Follow all applicable local, State and Federal regulations.


### SECTION 8. SPECIAL PROTECTION INFORMATION

Provide general inhalation and local exhaust ventilation to meet the TLV requirements. Approved respirators for dust and mist protections should be worn in emergency situations and whenever airborne levels exceed the TLV.

Use chemical goggles where dusty conditions occur and when handling solutions. Rubber gloves and protective clothing (aprons, etc.) should be worn when prolonged or repeated contact is likely.

Eyewash stations should be accessible in areas of use.

Contact lenses pose a special hazard; soft lenses absorb and all lenses concentrate irritants.

### SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS

Store in closed containers in a dry, well-ventilated area. Protect containers from physical damage. Keep containers closed when not in use. Maintain good housekeeping procedures to prevent accumulation and generation of dust. Use procedures that minimize airborne dust levels.

Follow good hygiene practice. After working with this material, always wash hands and face before eating, drinking or smoking.

DO NOT INGEST! Avoid inhalation of dust or of mist from solutions containing barium.

**DOT Classification:** Barium Compounds N.O.S. ID # UN1564. **LABEL:** POISON

**DATA SOURCE(S) CODE (See Glossary):** 2, 4, 12, 27, 54, 55.