POTASSIUM BROMATE
MATERIAL SAFETY DATA SHEET

INTEGRA Chemical Company
1216 6th Ave N
Kent WA 98032
Phone: 253-479-7000
24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)

Product Identification

Product Name: POTASSIUM BROMATE
Synonyms: Bromic acid, potassium salt
Chemical Formula: KBrO3
Formula Weight: 167.00
Chemical Family:
Integra Product Numbers: P679.10

Hazard Overview

HMIS Rating: 2-0-3-F  NFPA Rating: NE
Warning Label:
DANGER!
Strong oxidizer. Contact with flammable or combustible materials may cause fire or explosion. Harmful if swallowed or inhaled. Causes irritation. Avoid contact with skin, eyes and clothing. Use only with adequate protective equipment.

Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium bromate</td>
<td>07758-01-2</td>
<td>100</td>
</tr>
</tbody>
</table>

Physical Data

Boiling Point: 370 °C
Melting Point: 434 °C
Vapor Pressure: NA
Specific Gravity: 3.27 Water=1
Evaporation Rate: NA
Vapor Density: 5.8 Air = 1
Solubility:
8g/100g water @20°C

Appearance and Odor:
White powder or crystals.

Fire and Explosion Data

Flash Point: NA
Auto-ignition Temperature: NA
Flammable Limits (% by volume in air): Upper: NA Lower: NA

Fire Extinguishing Media:
Use extinguishing media appropriate for surrounding fire.

Special Firefighting Procedures:
Use water to cool nearby containers and structures. Wear full protective equipment, including suitable respiratory protection.

Unusual Fire and Explosion Hazards:
Strong oxidizer. Contact with combustible or flammable materials can cause fire or explosion.

Health Hazard Information

Effects of Overexposure
Skin Contact:
Contact may cause irritation or burns. In the presence of moisture material may be slowly absorbed in toxic amounts.
Health Hazard Information

Eye Contact:
Contact may burn or damage the eyes.

Ingestion:
Harmful if swallowed. Ingestion may cause nausea, vomiting and gastrointestinal irritation and burns to the mouth and throat. May cause abdominal pain, reduced urinary output, low blood pressure, methemoglobinemia, convulsions, liver and kidney damage and coma. Cyanosis may occur as a later symptom. Death may occur from renal failure within 1 to 2 weeks. Estimated lethal dose is 4 grams.

Inhalation:
Harmful if inhaled. Irritating to the nose and throat and respiratory system. Overexposure may cause coughing, difficulty in breathing and chest pains.

Chronic Effects of Overexposure:
Chronic exposure may cause kidney damage.

Exposure Limits:

<table>
<thead>
<tr>
<th>Component</th>
<th>TWA</th>
<th>STEL</th>
<th>Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium bromate</td>
<td>NE</td>
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ACGIH TLV

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</table>

Toxicity Data:

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 (oral, mouse)</th>
<th>LD50 (oral, rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium bromate</td>
<td>289 mg/kg</td>
<td>321 mg/kg</td>
</tr>
</tbody>
</table>

Medical Conditions Generally Aggravated by Exposure:
Respiratory, skin, liver and kidney conditions.

Target Organs:
None Identified

Reproductive Effects:
None Identified

Carcinogenicity:
None Identified

Component | NTP Listing | IARC Listing | OSHA Regulated |
-----------|-------------|--------------|----------------|
Potassium bromate | No listing | Group 2B, Possible Human Carcinogen | □ |

Emergency First Aid Procedures

Skin Contact:
Flush skin with plenty of water. Seek medical attention.

Eye Contact:
Flush with water for at least 15 minutes. Seek immediate medical attention.

Inhalation:
Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult administer oxygen. Seek medical attention.

Ingestion:
If swallowed, give victim large quantities of water and induce vomiting. Never give anything by mouth to an
Emergency First Aid Procedures

Ingestion:
- unconscious person. Seek immediate medical attention.

Additional First aid and Treatment Notes:
- No information available

Reactivity Data

Stability: Stable
Hazardous Polymerization: Will Not Occur
Incompatibles:
- Incompatible with strong acids. Reducing agents, organic material, aluminum, arsenic, calcium hydride, carbon, copper, powdered metals, metal sulfides, phosphonium iodine, phosphorus, lead acetate, selenium and sulfur.

Decomposition Products:
- Bromine fumes.

Conditions to Avoid:
- Excessive heat. Moisture. Contact with organic materials or other incompatibles.

Spill and Disposal Procedures

Spill and Leak Procedures:
- Remove all ignition sources. Sweep or scoop into disposal container in a manner that minimizes dust dispersion.
- Wear suitable protective equipment. Flush spill area with large quantities of water. Do not flush residues to sewer or storm drain.

Disposal Procedures:
- Dispose in accordance with all Local, State and Federal regulations.

Protective Equipment

Ventilation:
- Use adequate general or local exhaust ventilation to keep fume and/or dust levels as low as possible.

Respiratory Protection:
- None needed unless use generates annoying or irritating dusts, mists or vapors. Use a dust/mist respirator mask if necessary.

Skin and Eye Protective Equipment:
- Safety goggles, protective clothing and gloves. Maintain an eyewash station and safety shower nearby.

Storage and Handling Precautions

Storage Area: OXIDIZER
- Store in a cool, dry, area dedicated to the storage of oxidizers. Store well away from flammable and combustible materials. Protect material from exposure to air and moisture.

Transportation Information

- Regulated Material domestic ground transportation
  (reference: CFR Title 49, Transportation)
Transportation Information

<table>
<thead>
<tr>
<th>Proper Shipping Name:</th>
<th>Potassium bromate</th>
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</thead>
<tbody>
<tr>
<td>UN or NA Identification number:</td>
<td>UN1484</td>
</tr>
<tr>
<td>Hazard Class and Label:</td>
<td>5.1 Oxidizer</td>
</tr>
<tr>
<td>Packing Group:</td>
<td>III</td>
</tr>
<tr>
<td>Subsidiary Risk and Label:</td>
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☑ Regulated Material via Air Transportation

(regreference: ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air)

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<thead>
<tr>
<th>Packing Instruction</th>
<th>Max net qty per package</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Aircraft:</td>
<td>508/Y508  5/2.5 kg</td>
</tr>
<tr>
<td>Cargo Aircraft:</td>
<td>511  25 kg</td>
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Regulatory Information

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<tr>
<th>Component</th>
<th>TSCA Inventory</th>
<th>CERCLA RQ</th>
<th>SARA EHS TPQ</th>
<th>SARA 313 Toxic Release</th>
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<tbody>
<tr>
<td>Potassium bromate</td>
<td>☑ lbs</td>
<td>☑ lbs</td>
<td>☑ 0.1 lbs</td>
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<table>
<thead>
<tr>
<th>SARA Hazard Categories:</th>
<th>Acute</th>
<th>Chronic</th>
<th>Flammability</th>
<th>Pressure</th>
<th>Reactivity</th>
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<tr>
<th>Clean Air Act Categories:</th>
<th>SOCMI</th>
<th>HAP</th>
<th>Volatile HAP</th>
<th>Organic HAP</th>
<th>Ozone Depleting</th>
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MSDS Revision History:

002 - Format revisions; updated header phone number
003 - Updated Header Information

NE = Not established, NA = Not applicable or Not available

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***** END OF MSDS *****