SDS

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: **Potassium Bromate, 0.0913 Normal**

Product Code(s): P1055

Synonyms: Bromic acid, potassium salt, 0.0913 Normal

Recommended Use: For manufacturing, industrial, and laboratory use only. Use as a solvent or as a laboratory reagent.

Uses Advised Against: Not for food, drug, or household use.

Supplier: Rocky Mountain Reagents, Inc.
4621 Technology Drive, Golden, CO 80403
Phone: (303) 762-0800 Fax: (303) 762-1240

Emergency Phone Number: For health emergency, call poison control: (800) 222-1222.

2. HAZARDS IDENTIFICATION

Hazard Classifications: Carcinogenicity: Category 2

Signal Word: WARNING

Hazard Statements: Suspected of causing cancer.

Pictograms:



Precautionary Statements:

Prevention: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection, and face protection.

Response: If exposed or concerned: Get medical attention.

Storage: Store locked up.

Disposal: Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified: Not applicable.

Toxicity Statement: Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	Chemical Formula	% by Weight
Water	Water	7732-18-5	H_2O	99.745
Potassium Bromate	Bromic acid, potassium salt	7758-01-2	$KBrO_3$	0.225

Trade Secret Statement: Not applicable.

4. FIRST AID MEASURES

First Aid Procedures:

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious, or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention. If skin irritation persists: call a physician.

Eye Contact: Check for and remove contact lenses, if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention. Call a physician if symptoms occur.

General Advice: Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that those providing first aid and medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Symptoms and Effects: May cause irritation to eyes, skin, gastrointestinal tract, and respiratory system. May cause coughing, shortness of breath, abdominal pain, nausea, vomiting, and diarrhea. May affect kidneys, central nervous system, blood, and cardiovascular system. May cause methemoglobinemia and cyanosis. Respiratory depression.

Immediate Medical Care/ Special Treatment: Get medical attention if feeling unwell or concerned. Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water spray, carbon dioxide. Carbon dioxide may be less effective and only provide limited control.

Unsuitable Extinguishing Media: Dry powder, alcohol resistant foam. Do not use a solid (straight) water stream, as it may scatter and spread fire.

Hazardous Combustion Products: Hydrogen halides.

Specific Hazards: Excessive thermal conditions may cause decomposition and yield corrosive and/or toxic fumes. Keep away from combustible materials.

Special Protective Equipment/ Precautions for Firefighters: As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment: Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Wear appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin, and clothing. Keep combustibles away from spilled material.

Emergency Procedures: In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

Methods for Containment: Stop the flow of material if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this is possible. Product should not be released to the environment. Contain and recover waste when possible.

Methods for Cleanup: Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a non-combustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Residues from spills can be diluted with water. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment (see Section 8). Avoid contact with skin, eyes, and clothing. Do not ingest. When using, do not eat, drink, or smoke. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product.

Storage: Store locked up. Store in a cool, dry, ventilated area. Store in a segregated and approved area away from heat and incompatible materials (see Section 10). Store in original container. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:

Water:	No information found.	
Potassium Bromate:	AIHA:	TWA: 0.1 mg/m^3

Engineering Controls: Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls

to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Measures:

Eye/Face Protection: Wear safety glasses with side shields or safety goggles. Maintain approved eye wash station and accessible rinse facilities in work area.

Skin Protection: Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment: Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, all properties are given at 25 °C and standard pressure.

Appearance: Colorless, clear, transparent liquid.

Odor: Odorless.

Odor Threshold: No information found.

Formula Weight: 167.00 as $KBrO_3$

pH: 7 at 25 °C

Melting/Freezing Point: ≈ 0 °C

Boiling Point/Range: ≈ 100 °C

Decomposition Temperature: No information found.

Flash Point: Not applicable.

Auto-ignition Temperature: Not applicable.

Flammability: Not flammable.

Flammability/Explosive Limits: Not applicable.

Solubility: Miscible with water.

Vapor Pressure: No information found.

Vapor Density: No information found.

Specific Gravity: ≈ 1.00 (Water = 1)

Evaporation Rate: No information found.

Viscosity: No information found.

Partition Coefficient (n-octanol/water): No information found.

10. STABILITY AND REACTIVITY

Reactivity Data: May react violently with disulfur dibromide, selenium, aluminum, dinitrotoluene, arsenic, carbon, copper, metal sulfides, powdered metals, organic matter, combustible materials, acids, phosphorous, sulfur, lead(II) acetate, and strong bases.

Chemical Stability: Stable under recommended conditions.

Conditions to Avoid: Excessive heat, incompatible materials.

Incompatible Materials: Reducing agents, combustible materials, organic materials, sulfur, acids, strong bases, powdered metals, disulfur dibromide, phosphorous, metal sulfides, selenium, aluminum, dinitrotoluene, arsenic, carbon, copper, lead(II) acetate.

Hazardous Decomposition Products: Potassium oxides, hydrogen bromide.

Possibility of Hazardous Reactions: May react vigorously or violently with the incompatible materials listed above. Excessive thermal conditions may yield hazardous decomposition products listed above.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Inhalation, ingestion, skin contact, eye contact.

Acute Effects: May cause irritation to eyes, skin, gastrointestinal tract, and respiratory system. May cause coughing, shortness of breath, abdominal pain, nausea, vomiting, and diarrhea. Respiratory depression.

Chronic Effects: Suspected of causing cancer. Prolonged or repeated ingestion may affect behavior/central nervous system, metabolism (weight loss), and may cause kidney and liver damage. Metabolic acidosis/electrolyte abnormality in conjunction with acute renal failure may also occur. Prolonged or repeated inhalation can irritate the lungs. Repeated exposure may cause bronchitis to develop with cough, phlegm, and/or shortness of breath.

Toxicological Data:

Water:	Not applicable.	
Potassium Bromate:	LD_{50} Oral, Rat:	157 mg/kg
	LD_{50} Oral, Mouse:	289 mg/kg
	LD_{50} Oral, Hamster:	388 mg/kg
	LD_{50} Intraperitoneal, Rat:	50 mg/kg
	LD_{50} Intraperitoneal, Mouse:	177 mg/kg

Symptoms of Exposure: May cause irritation to eyes, skin, gastrointestinal tract, and respiratory system. May cause coughing, shortness of breath, abdominal pain, nausea, vomiting, and diarrhea. Cyanosis. Respiratory depression.

Carcinogenic Effects: No component of this product is considered to cause cancer by IARC, ACGIH, NTP, or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicological Data:

Water:	Not applicable.
Potassium Bromate:	No information found.

Persistence and Degradability: No information found.

Environmental Effects: Not expected to be hazardous to the environment. However, the possibility of an environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL INFORMATION

Disposal Instructions: Dispose of this material and its container to an approved waste collection point. Minimize exposure to product waste (see Section 8). Do not dispose unused waste down drains or into sewers. All wastes must be handled in accordance with local, state, and federal regulations.

Contaminated Packaging: Because containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

Waste Codes: No information found.

14. TRANSPORT INFORMATION

DOT: Not regulated.

Environmental Hazard Regulations: No information found.

Other Transport Precautions: No information found.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

Hazard Category	List (Yes/No)
Section 311 – Hazardous Chemical	Yes
Immediate Hazard	No
Delayed Hazard	Yes
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

Section 313: Potassium Bromate: 0.1% de minimis concentration

CERCLA Reportable Quantities: No information found.

International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

16. OTHER INFORMATION

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