

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/15/2023

Reviewed on 05/15/2023

1 Identification

- **Product identifier**
- **Trade name:** Potassium Bromate-Iodide
0.125N, NIST Traceable
- **Article number:** CY148
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson shermann@aquasolutions.org
- **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carcinogenicity 2

H351 Suspected of causing cancer.

Specific Target Organ Toxicity - Repeated Exposure 1 H372 Causes damage to organs through prolonged or repeated exposure.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Potassium Bromate
Potassium Iodide
- **Hazard statements**
Suspected of causing cancer.
Causes damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.

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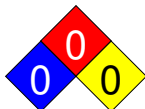
Get medical advice/attention if you feel unwell.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7681-11-0	Potassium Iodide	2.041%
CAS: 7758-01-2	Potassium Bromate	0.373%

· **Table of Nonhazardous Ingredients**

CAS: 7732-18-5	Water	97.586%
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4 First-aid measures

· **Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

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- **Special hazards arising from the substance or mixture**
 During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
- **Environmental precautions:**
 Dilute with plenty of water.
 Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose contaminated material as waste according to section 13.
 Ensure adequate ventilation.
- **Reference to other sections**
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· PAC-1:

CAS: 7681-11-0	Potassium Iodide	1.3 mg/m ³
CAS: 7758-01-2	Potassium Bromate	0.3 mg/m ³

· PAC-2:

CAS: 7681-11-0	Potassium Iodide	15 mg/m ³
CAS: 7758-01-2	Potassium Bromate	3.1 mg/m ³

· PAC-3:

CAS: 7681-11-0	Potassium Iodide	87 mg/m ³
CAS: 7758-01-2	Potassium Bromate	89 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

CAS: 7681-11-0 Potassium Iodide

TLV	Long-term value: 0.01 ppm A4; Skin; *inhalation
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CAS: 7758-01-2 Potassium Bromate

WEEL	Long-term value: 0.1 mg/m ³
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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

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9 Physical and chemical properties

· <i>Information on basic physical and chemical properties</i>	
· <i>General Information</i>	
· <i>Appearance:</i>	
· <i>Form:</i>	<i>Liquid</i>
· <i>Color:</i>	<i>Clear</i>
· <i>Odor:</i>	<i>Odorless</i>
· <i>Odor threshold:</i>	<i>Not determined.</i>
· <i>pH-value:</i> <i>Not determined.</i>	
· <i>Change in condition</i>	
· <i>Melting point/Melting range:</i>	<i>0 °C (32 °F)</i>
· <i>Boiling point/Boiling range:</i>	<i>100 °C (212 °F)</i>
· <i>Flash point:</i> <i>Not applicable.</i>	
· <i>Flammability (solid, gaseous):</i> <i>Not applicable.</i>	
· <i>Decomposition temperature:</i> <i>Not determined.</i>	
· <i>Ignition temperature:</i> <i>Product is not selfigniting.</i>	
· <i>Danger of explosion:</i> <i>Product does not present an explosion hazard.</i>	
· <i>Explosion limits:</i>	
· <i>Lower:</i>	<i>Not determined.</i>
· <i>Upper:</i>	<i>Not determined.</i>
· <i>Vapor pressure at 20 °C (68 °F):</i> <i>23 hPa (17.3 mm Hg)</i>	
· <i>Density at 20 °C (68 °F):</i> <i>1.01675 g/cm³ (8.48478 lbs/gal)</i>	
· <i>Relative density</i> <i>Not determined.</i>	
· <i>Vapor density</i> <i>Not determined.</i>	
· <i>Evaporation rate</i> <i>Not determined.</i>	
· <i>Solubility in / Miscibility with</i>	
· <i>Water:</i>	<i>Fully miscible.</i>
· <i>Partition coefficient (n-octanol/water):</i> <i>Not determined.</i>	
· <i>Viscosity:</i>	
· <i>Dynamic:</i>	<i>Not determined.</i>
· <i>Kinematic:</i>	<i>Not determined.</i>
· <i>Solvent content:</i>	
· <i>Water:</i>	<i>97.6 %</i>
· <i>VOC content:</i>	<i>0.00 %</i>
	<i>0.0 g/l / 0.00 lb/gal</i>
· <i>Solids content:</i> <i>2.4 %</i>	
· <i>Other information</i> <i>No further relevant information available.</i>	

10 Stability and reactivity

- *Reactivity* *No further relevant information available.*
- *Chemical stability*
- *Thermal decomposition / conditions to be avoided:* *No decomposition if used according to specifications.*

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- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	26,795 mg/kg
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

CAS: 7758-01-2	Potassium Bromate	2B
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- Water hazard class 2 (Self-assessment): hazardous for water
- Do not allow product to reach ground water, water course or sewage system.
- Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*
- **Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

14 Transport information

- | | |
|--|------------------------|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADN, IMDG, IATA | <i>Not regulated</i> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT, ADN, IMDG, IATA | <i>Not regulated</i> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT, ADN, IMDG, IATA · Class | <i>Not regulated</i> |
| <ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA | <i>Not regulated</i> |
| <ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: | <i>No</i> |
| <ul style="list-style-type: none"> · Special precautions for user | <i>Not applicable.</i> |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | <i>Not applicable.</i> |
| <ul style="list-style-type: none"> · UN "Model Regulation": | <i>Not regulated</i> |

* 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

<ul style="list-style-type: none"> · Section 355 (extremely hazardous substances):
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<i>None of the ingredients is listed.</i>

<ul style="list-style-type: none"> · Section 313 (Specific toxic chemical listings):
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CAS: 7758-01-2 Potassium Bromate

<ul style="list-style-type: none"> · TSCA (Toxic Substances Control Act):

Water	<i>ACTIVE</i>
Potassium Iodide	<i>ACTIVE</i>
Potassium Bromate	<i>ACTIVE</i>

<ul style="list-style-type: none"> · Hazardous Air Pollutants

<i>None of the ingredients is listed.</i>

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· **Proposition 65**

· **Chemicals known to cause cancer:**

CAS: 7758-01-2	Potassium Bromate
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· **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.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

CAS: 7758-01-2	Potassium Bromate	B2, K/L(oral), CBD(inh)
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· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Potassium Bromate

Potassium Iodide

· **Hazard statements**

Suspected of causing cancer.

Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials:**

Carcinogenic hazardous material group III (dangerous).

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· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.

· **Contact:**

· **Date of preparation / last revision**

Revision 1.0 05/15/2023, reviewed SDS for accuracy. STN

Revision 1.0 01-10-2022, removed fluoride and sulfate from ingredients. STN

Revision 0.1, 07-31-2018: Creation date for SDS. STN
 05/15/2023

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Carcinogenicity 2: Carcinogenicity – Category 2

Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1

· *** Data compared to the previous version altered.**

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