

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/15/2024

Reviewed on 05/15/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Lithium Bromide, Reagent Grade  
lithium bromide
- **Article number:** L4801
- **CAS Number:**  
7550-35-8
- **EC number:**  
231-439-8
- **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](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Acute Toxicity - Oral 4     H302 Harmful if swallowed.  
 Acute Toxicity - Dermal 4     H312 Harmful in contact with skin.  
 Skin Irritation 2     H315 Causes skin irritation.  
 Eye Irritation 2A     H319 Causes serious eye irritation.  
 Sensitization - Skin 1     H317 May cause an allergic skin reaction.

- **Label elements**

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

- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard statements**  
Harmful if swallowed or in contact with skin.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause an allergic skin reaction.
- **Precautionary statements**  
Avoid breathing dust/fume/gas/mist/vapors/spray

(Contd. on page 2)

US

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(Contd. of page 1)

*Wash thoroughly after handling.*

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

*Contaminated work clothing must not be allowed out of the workplace.*

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

*If swallowed: Call a poison center/doctor if you feel unwell.*

*If on skin: Wash with plenty of water.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*If eye irritation persists: Get medical advice/attention.*

*Take off contaminated clothing.*

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2

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: Substances**

· **CAS No. Description**

CAS: 7550-35-8 *Lithium Bromide, Reagent Grade*

· **Identification number(s)**

· **EC number:** 231-439-8

### 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 and to be sure call for a doctor.*

*In case of unconsciousness place patient stably in side position for transportation.*

· **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*

· **After eye contact:**

*Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.*

· **After swallowing:** *Immediately call a doctor.*

(Contd. on page 3)

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(Contd. of page 2)

- **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.*
- **Special hazards arising from the substance or mixture** *No further relevant information available.*
- **Advice for firefighters**
- **Protective equipment:** *No special measures required.*

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** *Not required.*
- **Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **Methods and material for containment and cleaning up:** *Pick up mechanically.*
- **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:**  $3.9 \text{ mg/m}^3$
- **PAC-2:**  $42 \text{ mg/m}^3$
- **PAC-3:**  $250 \text{ mg/m}^3$

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** *No special precautions are necessary if used correctly.*
- **Information about protection against explosions and fires:** *No special measures required.*
- **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.*

## 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:** *Not required.*
- **Additional information:** *The lists that were valid during the creation were used as basis.*

(Contd. on page 4)

US

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(Contd. of page 3)

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **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.
- **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

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

**Form:** Powder

**Color:** Beige

- **Odor:** Odorless

- **Odor threshold:** Not determined.

- **pH-value:** 20

- **Change in condition**

**Melting point/Melting range:** 550 °C (1,022 °F)

**Boiling point/Boiling range:** 1,265 °C (34.365 °F)

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Product is not flammable.

- **Decomposition temperature:** Not determined.

(Contd. on page 5)

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(Contd. of page 4)

|   |  |
|---|--|
| · <b>Ignition temperature:</b>                                    | <i>Not determined.</i>                               |
| · <b>Danger of explosion:</b>                                     | <i>Product does not present an explosion hazard.</i> |
| · <b>Explosion limits:</b>  |  |
| <b>Lower:</b>   | <i>Not determined.</i>                               |
| <b>Upper:</b>   | <i>Not determined.</i>                               |
| · <b>Vapor pressure at 748 °C (1,378.4 °F):</b>                   | <i>1 hPa (0.8 mm Hg)</i>                             |
| · <b>Density at 20 °C (68 °F):</b>                                | <i>3.46 g/cm<sup>3</sup> (28.8737 lbs/gal)</i>       |
| · <b>Bulk density:</b>  | <i>2 kg/m<sup>3</sup></i>                            |
| · <b>Relative density</b>   | <i>Not determined.</i>                               |
| · <b>Vapor density</b>  | <i>Not applicable.</i>                               |
| · <b>Evaporation rate</b>   | <i>Not applicable.</i>                               |
| · <b>Solubility in / Miscibility with Water at 20 °C (68 °F):</b> | <i>1490 g/l</i>                                      |
| · <b>Partition coefficient (n-octanol/water):</b>                 | <i>Not determined.</i>                               |
| · <b>Viscosity:</b>   |  |
| <b>Dynamic:</b>   | <i>Not applicable.</i>                               |
| <b>Kinematic:</b>   | <i>Not applicable.</i>                               |
| · <b>Other information</b>  | <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.*
- **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:**

|        |      |                   |
|--------|------|-------------------|
| Oral   | LD50 | 500 mg/kg (ATE)   |
| Dermal | LD50 | 1,100 mg/kg (ATE) |

- **Primary irritant effect:**
- **on the skin:** *Irritant to skin and mucous membranes.*
- **on the eye:** *Irritating effect.*
- **Sensitization:** *Sensitization possible through skin contact.*
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** *Substance is not listed.*
- **NTP (National Toxicology Program)** *Substance is not listed.*

(Contd. on page 6)

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(Contd. of page 5)

· **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not 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 1 (Assessment by list): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 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.

## 14 Transport information

|  |                 |
|--|-----------------|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> </ul>  | Not regulated   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> </ul>                            | Not regulated   |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul> | Not regulated   |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>   | Not regulated   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>                                | No              |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> </ul>  | Not applicable. |

(Contd. on page 7)

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(Contd. of page 6)

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** *Not applicable.*

· **Transport/Additional information:**

· **DOT**

· **Remarks:** *Not Regulated*

· **IMDG**

· **Remarks:** *Not Regulated*

· **IATA**

· **Remarks:** *Not Regulated*

· **UN "Model Regulation":** *Not regulated*

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
*No further relevant information available.*

· **Sara**

· **Section 355 (extremely hazardous substances):** *Substance is not listed.*

· **Section 313 (Specific toxic chemical listings):** *Substance is not listed.*

· **TSCA (Toxic Substances Control Act):** *ACTIVE*

· **Hazardous Air Pollutants** *Substance is not listed.*

· **Proposition 65**

· **Chemicals known to cause cancer:** *Substance is not listed.*

· **Chemicals known to cause reproductive toxicity for females:** *Substance is not listed.*

· **Chemicals known to cause reproductive toxicity for males:** *Substance is not listed.*

· **Chemicals known to cause developmental toxicity:** *Substance is not listed.*

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)** *Substance is not listed.*

· **TLV (Threshold Limit Value)** *Substance is not listed.*

· **NIOSH-Ca (National Institute for Occupational Safety and Health)** *Substance is not listed.*

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

· **Hazard pictograms**



GHS07

· **Signal word** *Warning*

· **Hazard statements**

*Harmful if swallowed or in contact with skin.*

*Causes skin irritation.*

*Causes serious eye irritation.*

*May cause an allergic skin reaction.*

· **Precautionary statements**

*Avoid breathing dust/fume/gas/mist/vapors/spray*

*Wash thoroughly after handling.*

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

*Contaminated work clothing must not be allowed out of the workplace.*

(Contd. on page 8)

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**lithium bromide**

(Contd. of page 7)

*Wear protective gloves/protective clothing/eye protection/face protection.*  
*If swallowed: Call a poison center/doctor if you feel unwell.*  
*If on skin: Wash with plenty of water.*  
*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
*If skin irritation or rash occurs: Get medical advice/attention.*  
*If eye irritation persists: Get medical advice/attention.*  
*Take off contaminated clothing.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*  
 · **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:
- **Date of preparation / last revision**  
Revision 1.2, 05/15/2024: Reviewed SDS for accuracy. MH/STN  
05/15/2024
- **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*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*NFPA: National Fire Protection Association (USA)*  
*HMIS: Hazardous Materials Identification System (USA)*  
*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*  
*Acute Toxicity - Oral 4: Acute toxicity – Category 4*  
*Skin Irritation 2: Skin corrosion/irritation – Category 2*  
*Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A*  
*Sensitization - Skin 1: Skin sensitisation – Category 1*
- **\* Data compared to the previous version altered.**

US