

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2019

Reviewed on 02/07/2019

## 1 Identification

- **Product identifier**
- **Trade name:** BROMOBENZENE, CERTIFIED
- **Article number:** B7010
- **CAS Number:**  
108-86-1
- **EC number:**  
203-623-8
- **Index number:**  
602-060-00-9
- **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 sherman@aquasolutions.org
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

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



GHS02



GHS07

- **Signal word** Warning
- **Hazard statements**  
Flammable liquid and vapor.  
Causes skin irritation.
- **Precautionary statements**  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Keep container tightly closed.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2019

Reviewed on 02/07/2019

Trade name: **BROMOBENZENE, CERTIFIED**

(Contd. of page 1)

Ground/bond container and receiving equipment.  
 Use explosion-proof electrical/ventilating/lighting/equipment.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Wash thoroughly after handling.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 Specific treatment (see on this label).  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 Take off contaminated clothing and wash it before reuse.  
 If skin irritation occurs: Get medical advice/attention.  
 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.  
 Store in a well-ventilated place. Keep cool.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 2

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 2

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**

108-86-1 bromobenzene

· **Identification number(s)**

· **EC number:** 203-623-8

· **Index number:** 602-060-00-9

## 4 First-aid measures

· **Description of first aid measures**

· **After inhalation:** 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.

· **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.

US  
(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2019

Reviewed on 02/07/2019

Trade name: **BROMOBENZENE, CERTIFIED**

(Contd. of page 2)

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **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**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** 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).  
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:** 0.96 ppm
- **PAC-2:** 11 ppm
- **PAC-3:** 240 ppm

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **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 item 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)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2019

Reviewed on 02/07/2019

Trade name: **BROMOBENZENE, CERTIFIED**

(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 skin.
  - 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:** Fluid
  - Color:** Not determined.
- **Odor:** Characteristic
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
  - Melting point/Melting range:** -31 °C (-23.8 °F)
  - Boiling point/Boiling range:** 156 °C (312.8 °F)
- **Flash point:** 51 °C (123.8 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 565 °C (1,049 °F)

(Contd. on page 5)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 02/07/2019

Reviewed on 02/07/2019

Trade name: **BROMOBENZENE, CERTIFIED**

(Contd. of page 4)

|   |  |
|---|--|
| · <b>Decomposition temperature:</b>                               | Not determined.  |
| · <b>Auto igniting:</b>   | Not determined.  |
| · <b>Danger of explosion:</b>                                     | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
| · <b>Explosion limits:</b>  |  |
| Lower:  | 0.5 Vol %  |
| Upper:  | 2.5 Vol %  |
| · <b>Vapor pressure at 20 °C (68 °F):</b>                         | 4 hPa (3 mm Hg)  |
| · <b>Density at 20 °C (68 °F):</b>                                | 1.49 g/cm <sup>3</sup> (12.43405 lbs/gal)  |
| · <b>Relative density</b>   | Not determined.  |
| · <b>Vapor density</b>  | Not determined.  |
| · <b>Evaporation rate</b>   | Not determined.  |
| · <b>Solubility in / Miscibility with Water at 20 °C (68 °F):</b> | 0.4 g/l  |
| · <b>Partition coefficient (n-octanol/water):</b>                 | Not determined.  |
| · <b>Viscosity:</b>   |  |
| Dynamic:  | Not determined.  |
| Kinematic:  | Not determined.  |
| · <b>Other information</b>  | No further relevant information available.   |

### 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:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

US

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2019

Reviewed on 02/07/2019

Trade name: **BROMOBENZENE, CERTIFIED**

(Contd. of page 5)


## 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.

## 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

- |   |                                |
|---|--------------------------------|
| · <b>UN-Number</b>  | UN2514                         |
| · <b>DOT, IMDG, IATA</b>  |                                |
| · <b>UN proper shipping name</b>  | Bromobenzene                   |
| · <b>DOT</b>  | BROMOBENZENE, MARINE POLLUTANT |
| · <b>IMDG</b>   | BROMOBENZENE                   |
| · <b>IATA</b>   |                                |
| · <b>Transport hazard class(es)</b>   |                                |
| · <b>DOT</b>  |                                |
|  |                                |
| · <b>Class</b>  | 3 Flammable liquids            |
| · <b>Label</b>  | 3                              |

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2019

Reviewed on 02/07/2019

Trade name: **BROMOBENZENE, CERTIFIED**

(Contd. of page 6)

· **IMDG**

· **Class** 3 Flammable liquids  
 · **Label** 3

· **IATA**

· **Class** 3 Flammable liquids  
 · **Label** 3

· **Packing group**

· **DOT, IMDG, IATA** III

· **Environmental hazards:** Environmentally hazardous substance, liquid; Marine Pollutant

· **Marine pollutant:** Yes (DOT)  
 Symbol (fish and tree)

· **Special precautions for user** Warning: Flammable liquids

· **Danger code (Kemler):** 30

· **EMS Number:** 3-07

· **Stowage Category** A

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

· **Transport/Additional information:**· **DOT**

· **Quantity limitations** On passenger aircraft/rail: 60 L

On cargo aircraft only: 220 L

· **Remarks:** Special marking with the symbol (fish and tree).

· **IMDG**

· **Limited quantities (LQ)** 5L

· **Excepted quantities (EQ)** Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":** UN 2514 BROMOBENZENE, 3, III

## 15 Regulatory information

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

· **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):**

bromobenzene

(Contd. on page 8)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 02/07/2019

Reviewed on 02/07/2019

Trade name: **BROMOBENZENE, CERTIFIED**

(Contd. of page 7)

|  |
|--|
| · <b>TSCA new (21st Century Act) (Substances not listed)</b> |
|--|

|               |              |
|---------------|--------------|
| CAS: 108-86-1 | bromobenzene |
|---------------|--------------|

- **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) II**
- **TLV (Threshold Limit Value established by ACGIH)** 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**



GHS02   GHS07

- **Signal word** Warning
- **Hazard statements**
  - Flammable liquid and vapor.
  - Causes skin irritation.
- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Keep container tightly closed.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.
  - Wash thoroughly after handling.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - Specific treatment (see on this label).
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - Take off contaminated clothing and wash it before reuse.
  - If skin irritation occurs: Get medical advice/attention.
  - In case of fire: Use for extinction: CO2, powder or water spray.
  - Store in a well-ventilated place. Keep cool.
  - 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**
  - Revision 0.0, 02-06-2019: Creation date for SDS. STN
  - 02/07/2019 / -
- **Abbreviations and acronyms:**
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/07/2019

Reviewed on 02/07/2019

**Trade name: BROMOBENZENE, CERTIFIED**

(Contd. of page 8)

IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
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)  
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  
Flam. Liq. 3: Flammable liquids – Category 3  
Skin Irrit. 2: Skin corrosion/irritation – Category 2

US