

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/11/2024

Reviewed on 06/11/2024

## 1 Identification

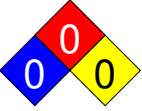
- **Product identifier**
- **Trade name:** Synthetic Brine
- **Article number:** HAL006
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Aqua Solutions, Inc.  
6913 Highway 225  
DEER PARK, TX 77536  
USA  
800-256-2586
- **Information department:**  
Technical Coordinator  
Sherman Nelson [shermann@aquasolutions.org](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
*The product is not classified, according to the Globally Harmonized System (GHS).*

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- **Label elements**
- **GHS label elements** Not Applicable
- **Hazard pictograms** Not Applicable
- **Signal word** Not Applicable
- **Hazard statements** Not Applicable
- **Precautionary statements**  
*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.*  
*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	0
FIRE	0
REACTIVITY	0

  - Health = 0
  - Fire = 0
  - Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 10035-04-8	Calcium Chloride Dihydrate	4.844%
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- **Table of Nonhazardous Ingredients**

CAS: 7732-18-5	Water	77.41%
CAS: 7647-14-5	Sodium Chloride	17.342%
CAS: 10025-70-4	Strontium Chloride Hexahydrate	0.269%
CAS: 7447-40-7	Potassium Chloride	0.168%
CAS: 1310-73-2	Sodium Hydroxide	0.063%
CAS: 7757-82-6	Sodium Sulfate Anhydrous	0.019%
CAS: 10043-35-3	boric acid	0.005%
CAS: 10025-77-1	Ferric Chloride Hexahydrate	0.002%
CAS: 144-55-8	Sodium Bicarbonate	0.001%
CAS: 10326-27-9	Barium Chloride Dihydrate	0.0002%

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **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.
- **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:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to section 13.

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- **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: 10035-04-8	Calcium Chloride Dihydrate	16 mg/m <sup>3</sup>
CAS: 1310-73-2	Sodium Hydroxide	0.5 mg/m <sup>3</sup>
CAS: 7757-82-6	Sodium Sulfate Anhydrous	9.8 mg/m <sup>3</sup>
CAS: 10043-35-3	boric acid	6 mg/m <sup>3</sup>
CAS: 10025-77-1	Ferric Chloride Hexahydrate	15 mg/m <sup>3</sup>
CAS: 144-55-8	Sodium Bicarbonate	13 mg/m <sup>3</sup>
CAS: 10326-27-9	Barium Chloride Dihydrate	2.7 mg/m <sup>3</sup>

· **PAC-2:**

CAS: 10035-04-8	Calcium Chloride Dihydrate	170 mg/m <sup>3</sup>
CAS: 1310-73-2	Sodium Hydroxide	5 mg/m <sup>3</sup>
CAS: 7757-82-6	Sodium Sulfate Anhydrous	110 mg/m <sup>3</sup>
CAS: 10043-35-3	boric acid	23 mg/m <sup>3</sup>
CAS: 10025-77-1	Ferric Chloride Hexahydrate	39 mg/m <sup>3</sup>
CAS: 144-55-8	Sodium Bicarbonate	140 mg/m <sup>3</sup>
CAS: 10326-27-9	Barium Chloride Dihydrate	330 mg/m <sup>3</sup>

· **PAC-3:**

CAS: 10035-04-8	Calcium Chloride Dihydrate	1,100 mg/m <sup>3</sup>
CAS: 1310-73-2	Sodium Hydroxide	50 mg/m <sup>3</sup>
CAS: 7757-82-6	Sodium Sulfate Anhydrous	650 mg/m <sup>3</sup>
CAS: 10043-35-3	boric acid	830 mg/m <sup>3</sup>
CAS: 10025-77-1	Ferric Chloride Hexahydrate	240 mg/m <sup>3</sup>
CAS: 144-55-8	Sodium Bicarbonate	840 mg/m <sup>3</sup>
CAS: 10326-27-9	Barium Chloride Dihydrate	2,000 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **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.

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- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **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. 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:** Goggles recommended during refilling.
- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

##### · Appearance:

<b>Form:</b>	Liquid
<b>Color:</b>	Clear
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.

##### · Change in condition

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

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· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17.3 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	1.13272 g/cm <sup>3</sup> (9.45255 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:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Water:</b>	77.4 %
<b>VOC content:</b>	0.00 %
	0.0 g/l / 0.00 lb/gal
<b>Solids content:</b>	22.7 %
· <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:**

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

**ATE (Acute Toxicity Estimate)**

Oral	LD50	20,643 mg/kg (rat)
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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 is not subject to classification according to internally approved calculation methods for preparations:

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When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **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 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **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:** Smaller quantities can be disposed of with household waste.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- **UN-Number**

- **DOT, IMDG, IATA** Not regulated

- **UN proper shipping name**

- **DOT, IATA** Not regulated

- **IMDG** Not Regulated

Not regulated

- **Transport hazard class(es)**

- **DOT, ADN, IMDG, IATA**

- **Class** Not regulated

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- |                                                                                  |                 |
|----------------------------------------------------------------------------------|-----------------|
| · <b>Packing group</b><br>· <b>DOT, IMDG, IATA</b>                               | Not regulated   |
| · <b>Environmental hazards:</b>                                                  | Not applicable. |
| · <b>Special precautions for user</b>                                            | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>                                                  | Not regulated   |

## 15 Regulatory information

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

· <b>Section 355 (extremely hazardous substances):</b>
--------------------------------------------------------

None of the ingredients is listed.

· <b>Section 313 (Specific toxic chemical listings):</b>
----------------------------------------------------------

CAS: 10326-27-9 | Barium Chloride Dihydrate

· <b>TSCA (Toxic Substances Control Act):</b>
-----------------------------------------------

Water	ACTIVE
Sodium Chloride	ACTIVE
Potassium Chloride	ACTIVE
Sodium Hydroxide	ACTIVE
Sodium Sulfate Anhydrous	ACTIVE
boric acid	ACTIVE
Sodium Bicarbonate	ACTIVE

· <b>Hazardous Air Pollutants</b>
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None of the ingredients is listed.

· <b>Proposition 65</b>
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· <b>Chemicals known to cause cancer:</b>
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None of the ingredients is listed.

· <b>Chemicals known to cause reproductive toxicity for females:</b>
----------------------------------------------------------------------

None of the ingredients is listed.

· <b>Chemicals known to cause reproductive toxicity for males:</b>
--------------------------------------------------------------------

None of the ingredients is listed.

· <b>Chemicals known to cause developmental toxicity:</b>
-----------------------------------------------------------

None of the ingredients is listed.

· <b>Carcinogenic categories</b>
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· <b>EPA (Environmental Protection Agency)</b>
------------------------------------------------

CAS: 10043-35-3   boric acid	I (oral)
CAS: 10326-27-9   Barium Chloride Dihydrate	D, CBD(inh), NL(oral)

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· **TLV (Threshold Limit Value)**

CAS: 10043-35-3	boric acid	A4
CAS: 10326-27-9	Barium Chloride Dihydrate	A4

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

None of the ingredients is listed.

· **GHS label elements** Not Applicable

· **Hazard pictograms** Not Applicable

· **Signal word** Not Applicable

· **Hazard statements** Not Applicable

· **Precautionary statements**

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.

Store locked up.

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, 06/10/2024: Reviewed SDS for accuracy. MH/STN

Revision 0.0, 05-29-2024: Creation date for SDS. STN

06/11/2024 / 1.0

· **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

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