

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Neutralization Buffer Solution
- **Article number:** UCT011
- **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**



GHS02 Flame

Flammable Liquids 3 H226 Flammable liquid and vapor.



GHS05 Corrosion

Skin Corrosion 1B H314 Causes severe skin burns and eye damage.

Eye Damage 1 H318 Causes serious eye damage.



GHS07

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

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



GHS02



GHS05



GHS07

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**  
Acetic Acid, Glacial  
Sodium Hydroxide

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024

**Trade name: Neutralization Buffer  
Solution**

(Contd. of page 1)

- **Hazard statements**

*Flammable liquid and vapor.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.*

- **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.  
Do not breathe dusts or mists.  
Wash thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If swallowed: Rinse mouth. Do NOT induce vomiting.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Immediately call a poison center/doctor.  
Specific treatment (see on this label).  
If skin irritation or rash occurs: Get medical advice/attention.  
Wash contaminated clothing before reuse.  
In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.  
Store in a well-ventilated place. Keep cool.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



*Health = 3  
Fire = 1  
Reactivity = 0*

- **HMIS-ratings (scale 0 - 4)**



*Health = 3  
Fire = 1  
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: 64-19-7	Acetic Acid, Glacial	7.867%
--------------	----------------------	--------

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024

**Trade name: Neutralization Buffer  
Solution**

(Contd. of page 2)

CAS: 1310-73-2	Sodium Hydroxide	4.203%
<b>· Table of Nonhazardous Ingredients</b>		
CAS: 7732-18-5	Water	75.089%
CAS: 6131-90-4	Sodium Acetate Trihydrate	12.841%

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **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. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a 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:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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.  
Wear protective equipment. Keep unprotected persons away.
- **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).  
Use neutralizing agent.  
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.

(Contd. on page 4)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024

**Trade name: Neutralization Buffer  
Solution**

(Contd. of page 3)

### · Protective Action Criteria for Chemicals

#### · PAC-1:

CAS: 6131-90-4	Sodium Acetate Trihydrate	11 mg/m <sup>3</sup>
CAS: 64-19-7	Acetic Acid, Glacial	5 ppm
CAS: 1310-73-2	Sodium Hydroxide	0.5 mg/m <sup>3</sup>

#### · PAC-2:

CAS: 6131-90-4	Sodium Acetate Trihydrate	120 mg/m <sup>3</sup>
CAS: 64-19-7	Acetic Acid, Glacial	35 ppm
CAS: 1310-73-2	Sodium Hydroxide	5 mg/m <sup>3</sup>

#### · PAC-3:

CAS: 6131-90-4	Sodium Acetate Trihydrate	690 mg/m <sup>3</sup>
CAS: 64-19-7	Acetic Acid, Glacial	250 ppm
CAS: 1310-73-2	Sodium Hydroxide	50 mg/m <sup>3</sup>

## 7 Handling and storage

### · Handling:

#### · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

#### · Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

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.

## 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: 64-19-7 Acetic Acid, Glacial

PEL Long-term value: 25 mg/m<sup>3</sup>, 10 ppm

REL Short-term value: 37 mg/m<sup>3</sup>, 15 ppm

Long-term value: 25 mg/m<sup>3</sup>, 10 ppm

TLV Short-term value: 15 ppm

Long-term value: 10 ppm

##### CAS: 1310-73-2 Sodium Hydroxide

PEL Long-term value: 2 mg/m<sup>3</sup>

REL Ceiling limit value: 2 mg/m<sup>3</sup>

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024

**Trade name: Neutralization Buffer  
Solution**

(Contd. of page 4)

TLV	Ceiling limit value: 2 mg/m <sup>3</sup>
-----	--

· **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.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **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

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

**Form:** Liquid

**Color:** Clear

· **Odor:** Vinegar

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** Undetermined.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024

**Trade name: Neutralization Buffer  
Solution**

(Contd. of page 5)

<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
<b>· Flash point:</b>	40 °C (104 °F)
<b>· Flammability (solid, gaseous):</b>	Flammable.
<b>· Auto igniting:</b>	485 °C (905 °F)
<b>· Decomposition temperature:</b>	Not determined.
<b>· Ignition temperature:</b>	Product is not selfigniting.
<b>· Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
<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>	1.07079 g/cm <sup>3</sup> (8.93574 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>	Fully miscible.
<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>Organic solvents:</b>	7.9 %
<b>Water:</b>	75.1 %
<b>VOC content:</b>	7.87 %
	84.2 g/l / 0.70 lb/gal
<b>Solids content:</b>	17.0 %
<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.

US

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024

**Trade name: Neutralization Buffer  
Solution**

(Contd. of page 6)

## 11 Toxicological information

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

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

### ATE (Acute Toxicity Estimate)

Oral	LD50	47,591 mg/kg (rat)
Dermal	LD50	13,474 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:**  
Strong caustic effect.  
Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Corrosive  
Irritant  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **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.  
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

US

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024



**Trade name: Neutralization Buffer  
Solution**

(Contd. of page 7)

## 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"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>   | <p style="text-align: right;">UN1760</p>   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>IMDG, IATA</b></li> </ul>  | <p style="text-align: right;">Corrosive liquids, n.o.s. (Sodium Hydroxide, Acetic Acid, Glacial )<br/>CORROSIVE LIQUID, N.O.S. (Sodium Hydroxide, Acetic Acid, Glacial )</p> |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>  | <p style="text-align: right;">8 Corrosive substances</p>   |
| <div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | <p style="text-align: right;">8<br/>8</p>  |
| <ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul>  | <p style="text-align: right;">8 Corrosive substances</p>   |
| <div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | <p style="text-align: right;">8<br/>8</p>  |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>   | <p style="text-align: right;">II</p>   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>  | <p style="text-align: right;">No</p>   |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Segregation groups</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Stowage Code</b></li> </ul> | <p style="text-align: right;">Warning: Corrosive substances<br/>83<br/>F-A,S-B<br/>(SGG18) Alkalis, (SGG1) acids<br/>B<br/>SW2 Clear of living quarters.</p>                 |

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024

**Trade name: Neutralization Buffer  
Solution**

(Contd. of page 8)

- |  |   |
|--|---|
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.   |
| <b>· Transport/Additional information:</b>                                       |   |
| <b>· DOT</b>   |   |
| <b>· Quantity limitations</b>  | On passenger aircraft/rail: 1 L<br>On cargo aircraft only: 30 L   |
| <hr style="border-top: 1px dashed black;"/>                                      |   |
| <b>· IMDG</b>  |   |
| <b>· Limited quantities (LQ)</b>   | 1L  |
| <b>· Excepted quantities (EQ)</b>  | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| <b>· UN "Model Regulation":</b>  | UN 1760 CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE, ACETIC ACID, GLACIAL), 8, II                                |

## 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):**

None of the ingredients is listed.

- Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- TSCA (Toxic Substances Control Act):**

Water	ACTIVE
Acetic Acid, Glacial	ACTIVE
Sodium Hydroxide	ACTIVE

- Hazardous Air Pollutants**

None of the ingredients is listed.

- Proposition 65**

- Chemicals known to cause cancer:**

None of the ingredients is listed.

- 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)**

None of the ingredients is listed.

(Contd. on page 10)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024

**Trade name: Neutralization Buffer  
Solution**

(Contd. of page 9)

· **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**



GHS02    GHS05    GHS07

· **Signal word** *Danger*

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

Acetic Acid, Glacial

Sodium Hydroxide

· **Hazard statements**

Flammable liquid and vapor.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

· **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.

Do not breathe dusts or mists.

Wash thoroughly after handling.

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

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

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

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

Wash contaminated clothing before reuse.

In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

Store in a well-ventilated place. Keep cool.

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.

(Contd. on page 11)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/04/2024

Reviewed on 06/04/2024

**Trade name: Neutralization Buffer  
Solution**

(Contd. of page 10)

- **Department issuing SDS:** Environment protection department.
- **Contact:**  
Date of Preparation / Last Revision:
- **Date of preparation / last revision**  
Revision 1.2, 06/04/2024: Reviewed SDS for accuracy. MH/STN  
06/04/2024
- **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  
 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  
 Flammable Liquids 3: Flammable liquids – Category 3  
 Skin Corrosion 1B: Skin corrosion/irritation – Category 1B  
 Eye Damage 1: Serious eye damage/eye irritation – Category 1  
 Sensitization - Skin 1: Skin sensitisation – Category 1
- **\* Data compared to the previous version altered.**

US