

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/20/2017

Reviewed on 11/20/2017

## 1 Identification

- **Product identifier**
- **Trade name:** Ammonium Acetate  
Buffer Solution
- **Article number:** GEN050
- **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.

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



GHS02

- **Signal word** Warning
- **Hazard statements**  
Flammable liquid and vapor.
- **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.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/20/2017

Reviewed on 11/20/2017

**Trade name: Ammonium Acetate  
Buffer Solution**

(Contd. of page 1)

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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



- **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 | 5.954% |
|--------------|-------------|--------|

· **Table of Nonhazardous Ingredients**

|                |                  |         |
|----------------|------------------|---------|
| CAS: 631-61-8  | Ammonium Acetate | 7.648%  |
| CAS: 7732-18-5 | Water            | 86.398% |

### 4 First-aid measures

- **Description of first aid measures**
- **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:**  
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** No further relevant information available.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/20/2017

Reviewed on 11/20/2017

**Trade name: Ammonium Acetate  
Buffer Solution**

(Contd. of page 2)

- **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:**  
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).  
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: 631-61-8 | Ammonium Acetate | 3.8 mg/m <sup>3</sup> |
| CAS: 64-19-7  | Acetic Acid      | 5 ppm                 |

- **PAC-2:**

|               |                  |                      |
|---------------|------------------|----------------------|
| CAS: 631-61-8 | Ammonium Acetate | 42 mg/m <sup>3</sup> |
| CAS: 64-19-7  | Acetic Acid      | 35 ppm               |

- **PAC-3:**

|               |                  |                       |
|---------------|------------------|-----------------------|
| CAS: 631-61-8 | Ammonium Acetate | 250 mg/m <sup>3</sup> |
| CAS: 64-19-7  | Acetic Acid      | 250 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.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/20/2017

Reviewed on 11/20/2017

**Trade name: Ammonium Acetate  
Buffer Solution**

(Contd. of page 3)

· **Control parameters**

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

**CAS: 64-19-7 Acetic Acid**

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: 37 mg/m<sup>3</sup>, 15 ppm  
Long-term value: 25 mg/m<sup>3</sup>, 10 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

· **Breathing equipment:** Not required.

· **Protection of hands:**

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.

Boiling point/Boiling range: 100 °C (212 °F)

· **Flash point:** 40 °C (104 °F)

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/20/2017

Reviewed on 11/20/2017

**Trade name: Ammonium Acetate  
Buffer Solution**

(Contd. of page 4)

|  |  |
|--|--|
| · <b>Flammability (solid, gaseous):</b>              | Not applicable.  |
| · <b>Ignition temperature:</b>                       | 485 °C (905 °F)  |
| · <b>Decomposition temperature:</b>                  | Not determined.  |
| · <b>Auto igniting:</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>                   | 1.00851 g/cm <sup>3</sup> (8.41602 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<br/>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>                             | 6.0 %  |
| <b>Water:</b>  | 86.4 %   |
| <b>VOC content:</b>                                  | 5.95 %   |
|  | 60.0 g/l / 0.50 lb/gl  |
| <b>Solids content:</b>                               | 7.6 %  |
| · <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 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/20/2017

Reviewed on 11/20/2017

**Trade name: Ammonium Acetate  
Buffer Solution**

(Contd. of page 5)

## 11 Toxicological information

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

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

**ATE (Acute Toxicity Estimate)**

|        |      |                       |
|--------|------|-----------------------|
| Oral   | LD50 | 55,592 mg/kg (rat)    |
| Dermal | LD50 | 17,803 mg/kg (rabbit) |

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

· **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:**
- 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.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/20/2017



Reviewed on 11/20/2017

**Trade name: Ammonium Acetate  
Buffer Solution**

(Contd. of page 6)

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

|   |  |
|---|--|
| · UN-Number   | UN1760   |
| · DOT, IMDG, IATA   |  |
| · UN proper shipping name   | Corrosive liquids, n.o.s. (Acetic acid, glacial)                                   |
| · DOT   | CORROSIVE LIQUID, N.O.S. (ACETIC ACID, GLACIAL)                                    |
| · IMDG, IATA  |  |
| · Transport hazard class(es)  |  |
| · DOT   |  |
|   |   |
| · Class   | 3 Flammable liquids  |
| · Label   | 8  |
|   |  |
| · IMDG, IATA  |  |
|   |  |
| · Class   | 8 Corrosive substances   |
| · Label   | 8  |
| · Packing group   | III  |
| · DOT, IMDG, IATA   |  |
| · Environmental hazards:  | Not applicable.  |
| · Special precautions for user  | Warning: Corrosive substances  |
| · Danger code (Kemler):   | 30   |
| · EMS Number:   | F-A,S-B  |
| · Segregation groups  | Acids  |
| · Stowage Category  | A  |
| · Stowage Code  | SW2 Clear of living quarters.  |
| · 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<br>On cargo aircraft only: 220 L                  |
|   |  |
| · IMDG  |  |
| · Limited quantities (LQ)   | 5L   |

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/20/2017

Reviewed on 11/20/2017

**Trade name: Ammonium Acetate  
Buffer Solution**

(Contd. of page 7)

· **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 1760 CORROSIVE LIQUIDS, N.O.S. (ACETIC ACID, GLACIAL), 8, III

## 15 Regulatory information

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

Ammonium Acetate

Acetic Acid

Water

· **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)**

CAS: 631-61-8 Ammonium Acetate

D

· **TLV (Threshold Limit Value established by ACGIH)**

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

· **Signal word** Warning

(Contd. on page 9)



# Safety Data Sheet

## acc. to OSHA HCS

Printing date 11/20/2017

Reviewed on 11/20/2017

**Trade name: Ammonium Acetate  
Buffer Solution**

(Contd. of page 8)

- **Hazard statements**  
*Flammable liquid and vapor.*
- **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.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
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.*
- **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**  
*11-20-2017: review SDS for accuracy. STN  
Revision 0.0, 11-13-2015: Creation date for SDS. STN  
11/20/2017 / -*
- **Abbreviations and acronyms:**  
*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
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  
Flam. Liq. 3: Flammable liquids – Category 3*

US