

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.26.2017

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Revision date: 12.08.2017

**Ammonia Solution, 25% w/w as NH3**

## SECTION 1: Identification

### Product identifier

**Product name:** Ammonia Solution, 25% w/w as NH3

**Product code:** QCAH2400-Q

### Recommended use of the product and restriction on use

**Relevant identified uses:** Laboratory chemicals

**Uses advised against:** Not determined or not applicable.

**Reasons why uses advised against:** Not determined or not applicable.

### Manufacturer or supplier details

**Manufacturer:**

**United States**

ChemWorld

3939 Royal Dr.

Suite226

Kennesaw

GA 30144

(800) 658-7716

### Emergency telephone number:

**United States**

Emergency Telephone No.: (800) 255-3924

## SECTION 2: Hazard(s) identification

### GHS classification:

Skin corrosion, category 1B

Serious eye damage, category 1

Acute aquatic hazard, category 1

### Label elements

#### Hazard pictograms:



**Signal word:** Danger

### Hazard statements:

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H400 Very toxic to aquatic life

### Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray

P264 Wash skin thoroughly after handling

P280 Wear protective gloves/protective clothing/eye protection/face protection

P273 Avoid release to the environment

P321 Specific treatment (see supplemental first aid instructions on this label).

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P363 Wash contaminated clothing before reuse

P304+P340+P310 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician

P301+P330+P331+P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

P303+P361+P353+P310 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338+P310 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 or doctor/physician.

P391 Collect spillage

P405 Store locked up

P501 Dispose of contents and container as instructed in Section 13

**Hazards not otherwise classified:** None

## SECTION 3: Composition/information on ingredients

| Identification           | Name               | Weight % |
|--------------------------|--------------------|----------|
| CAS number:<br>7732-18-5 | Water              | <100     |
| CAS number:<br>1336-21-6 | Ammonium Hydroxide | >25      |

**Additional Information:** None

## SECTION 4: First aid measures

### Description of first aid measures

#### General notes:

Not determined or not applicable.

#### After inhalation:

Loosen clothing as necessary and position individual in a comfortable position

Maintain an unobstructed airway

Get medical advice/attention if you feel unwell

Move exposed individual to fresh air

Immediately call a POISON CONTROL CENTER or seek medical attention

#### After skin contact:

Wash affected area with soap and water

Seek medical attention if symptoms develop or persist

Immediately remove all contaminated clothing

Immediately call a POISON CONTROL CENTER or seek medical attention

#### After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes

Remove contact lens(es) if able to do so during rinsing

Seek medical attention if irritation persists or if concerned

Immediately call a POISON CONTROL CENTER or seek medical attention

#### After swallowing:

Rinse mouth and then drink plenty of water

Do not induce vomiting

Get medical advice/attention if you feel unwell

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Immediately call a POISON CONTROL CENTER or seek medical attention

#### Most important symptoms and effects, both acute and delayed

##### Acute symptoms and effects:

Not determined or not applicable.

##### Delayed symptoms and effects:

Not determined or not applicable.

#### Immediate medical attention and special treatment

##### Specific treatment:

Not determined or not applicable.

##### Notes for the doctor:

Not determined or not applicable.

### SECTION 5: Firefighting measures

#### Extinguishing media

##### Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

##### Unsuitable extinguishing media:

Not determined or not applicable.

#### Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

#### Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing

Refer to Section 8

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

#### Special precautions:

Heating causes a rise in pressure, risk of bursting and combustion

Shut off sources of ignition

Carbon monoxide and carbon dioxide may form upon combustion

### SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

#### Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

#### Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)

Dispose of contents / container in accordance with local regulations

#### Reference to other sections:

Not determined or not applicable.

### SECTION 7: Handling and storage

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### Precautions for safe handling:

- Do not eat, drink, smoke or use personal products when handling chemical substances.
- Avoid breathing mist or vapor.
- Use only with adequate ventilation.

### Conditions for safe storage, including any incompatibilities:

- Store in a cool, well-ventilated area.
- Store away from foodstuffs.

## SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

### Occupational Exposure limit values:

| Country (Legal Basis) | Substance          | Identifier | Permissible concentration                             |
|-----------------------|--------------------|------------|---|
| ACGIH                 | Ammonium Hydroxide | 1336-21-6  | ACGIH TLV TWA 25 ppm (NH <sub>3</sub> )               |
|                       | Ammonium Hydroxide | 1336-21-6  | ACGIH TLV STEL 35 ppm (NH <sub>3</sub> )              |
| United States (OSHA)  | Ammonium Hydroxide | 1336-21-6  | OSHA PEL TWA 50 ppm (NH <sub>3</sub> )                |
|                       | Ammonium Hydroxide | 1336-21-6  | OSHA PEL TWA 35 mg/m <sup>3</sup> (NH <sub>3</sub> )  |
| NIOSH                 | Ammonium Hydroxide | 1336-21-6  | NIOSH REL TWA 25 ppm (NH <sub>3</sub> )               |
|                       | Ammonium Hydroxide | 1336-21-6  | NIOSH REL TWA 18 mg/m <sup>3</sup> (NH <sub>3</sub> ) |
|                       | Ammonium Hydroxide | 1336-21-6  | NIOSH REL ST 35 ppm (NH <sub>3</sub> )                |
|                       | Ammonium Hydroxide | 1336-21-6  | NIOSH REL ST 27 mg/m <sup>3</sup> (NH <sub>3</sub> )  |

### Biological limit values:

No biological exposure limits noted for the ingredient(s).

### Information on monitoring procedures:

Not determined or not applicable.

### Appropriate engineering controls:

- Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
- Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

### Personal protection equipment

#### Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

#### Skin and body protection:

Select glove material impermeable and resistant to the substance.

#### Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

### General hygienic measures:

- Wash hands before breaks and at the end of work.
- Avoid contact with skin, eyes and clothing.
- Perform routine housekeeping.
- Wash contaminated clothing before reusing.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

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|   |                                  |
|---|----------------------------------|
| Appearance                              | Clear, colorless liquid          |
| Odor                                    | Ammonia odor                     |
| Odor threshold                          | Not available                    |
| pH                                      | 10.6-11.6                        |
| Melting point/freezing point            | Approx. -72°C                    |
| Initial boiling point/range             | Approx. 36°C                     |
| Flash point (closed cup)                | Not available                    |
| Evaporation rate                        | Not available                    |
| Flammability (solid, gas)               | Not available                    |
| Upper flammability/explosive limit      | Not available                    |
| Lower flammability/explosive limit      | Not available                    |
| Vapor pressure                          | 115 at 20°C                      |
| Vapor density                           | Not available                    |
| Density                                 | Not available                    |
| Relative density                        | Approx. 0.9-1.0                  |
| Solubilities                            | Infinite solubility in water.    |
| Partition coefficient (n-octanol/water) | Not available                    |
| Auto/Self-ignition temperature          | Not available                    |
| Decomposition temperature               | Not available                    |
| Dynamic viscosity                       | Not available                    |
| Kinematic viscosity                     | Not available                    |
| Explosive properties                    | Not determined or not available. |
| Oxidizing properties                    | Not determined or not available. |

#### Other information

### SECTION 10: Stability and reactivity

#### Reactivity:

Does not react under normal conditions of use and storage.

#### Chemical stability:

Stable under normal conditions of use and storage.

#### Possibility of hazardous reactions:

None under normal conditions of use and storage.

#### Conditions to avoid:

None known.

#### Incompatible materials:

None known.

#### Hazardous decomposition products:

None known.

### SECTION 11: Toxicological information

#### Acute toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

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### Ammonia Solution, 25% w/w as NH<sub>3</sub>

#### Skin corrosion/irritation

**Assessment:** Causes severe skin burns and eye damage

**Product data:** No data available.

**Substance data:**

| Name               | Result                                   |
|--------------------|--|
| Ammonium Hydroxide | Causes severe skin burns and eye damage. |

#### Serious eye damage/irritation

**Assessment:** Causes serious eye damage

**Product data:** No data available.

**Substance data:** No data available.

#### Respiratory or skin sensitization

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

#### Carcinogenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

**International Agency for Research on Cancer (IARC):** None of the ingredients are listed.

**National Toxicology Program (NTP):** None of the ingredients are listed.

#### Germ cell mutagenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

#### Reproductive toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

#### Specific target organ toxicity (single exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

#### Specific target organ toxicity (repeated exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

#### Aspiration toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

**Information on likely routes of exposure:** No data available.

**Symptoms related to the physical, chemical and toxicological characteristics:** No data available.

**Other information:** No data available.

### SECTION 12: Ecological information

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### Acute (short-term) toxicity

**Assessment:** Very toxic to aquatic life

**Product data:** No data available.

**Substance data:**

| Name               | Result                                |
|--------------------|---------------------------------------|
| Ammonium Hydroxide | LC50 - Coho salmon - 0.45 mg/L - 96 h |

### Chronic (long-term) toxicity

**Product data:** No data available.

**Substance data:** No data available.

### Persistence and degradability

**Product data:** No data available.

**Substance data:** No data available.

### Bioaccumulative potential

**Product data:** No data available.

**Substance data:** No data available.

### Mobility in soil

**Product data:** No data available.

**Substance data:** No data available.

**Other adverse effects:** No data available.



## SECTION 13: Disposal considerations

### Disposal methods:



It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

## SECTION 14: Transport information

### United States Transportation of dangerous goods (49 CFR DOT)

|                               |   |
|-------------------------------|---|
| UN number                     | UN2672  |
| UN proper shipping name       | Ammonia solution  |
| UN transport hazard class(es) | 8   |
| Packing group                 | III   |
| Environmental hazards         | Marine Pollutant<br>Ammonium hydroxide  |
| Special precautions for user  | None  |

### International Maritime Dangerous Goods (IMDG)

|                               |   |
|-------------------------------|---|
| UN number                     | UN2672  |
| UN proper shipping name       | Ammonia solution  |
| UN transport hazard class(es) | 8   |
| Packing group                 | III   |
| Environmental hazards         | Marine Pollutant<br>Ammonium hydroxide  |

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|                                     |      |
|-------------------------------------|------|
| <b>Special precautions for user</b> | None |
|-------------------------------------|------|

#### International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

|                                      |   |
|--------------------------------------|---|
| <b>UN number</b>                     | UN2672  |
| <b>UN proper shipping name</b>       | Ammonia solution  |
| <b>UN transport hazard class(es)</b> | 8  |
| <b>Packing group</b>                 | III   |
| <b>Environmental hazards</b>         | Marine Pollutant<br>Ammonium hydroxide  |
| <b>Special precautions for user</b>  | None  |

|  |      |
|--|------|
| <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> |      |
| <b>Bulk Name</b>   | None |
| <b>Ship type</b>   | None |
| <b>Pollution category</b>  | None |

### SECTION 15: Regulatory information

#### United States regulations

##### Inventory listing (TSCA):

|           |                    |        |
|-----------|--------------------|--------|
| 1336-21-6 | Ammonium Hydroxide | Listed |
| 7732-18-5 | Water              | Listed |

**Significant New Use Rule (TSCA Section 5):** Not determined.

**Export notification under TSCA Section 12(b):** Not determined.

##### SARA Section 311/312 hazards:

|       |         |      |          |          |
|-------|---------|------|----------|----------|
| Acute | Chronic | Fire | Pressure | Reactive |
| Yes   | No      | No   | No       | No       |

**SARA Section 302 extremely hazardous substances:** Not determined.

##### SARA Section 313 toxic chemicals:

|           |                    |        |
|-----------|--------------------|--------|
| 1336-21-6 | Ammonium Hydroxide | Listed |
|-----------|--------------------|--------|

##### CERCLA:

|           |                    |        |      |
|-----------|--------------------|--------|------|
| 1336-21-6 | Ammonium Hydroxide | Listed | 1000 |
|-----------|--------------------|--------|------|

**RCRA:** Not determined.

**Section 112(r) of the Clean Air Act (CAA):** Not determined.

##### Massachusetts Right to Know:

|           |                    |            |
|-----------|--------------------|------------|
| 1336-21-6 | Ammonium Hydroxide | Listed     |
| 7732-18-5 | Water              | Not Listed |

##### New Jersey Right to Know:

|           |                    |            |
|-----------|--------------------|------------|
| 1336-21-6 | Ammonium Hydroxide | Not Listed |
|-----------|--------------------|------------|



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|           |       |            |
|-----------|-------|------------|
| 7732-18-5 | Water | Not Listed |
|-----------|-------|------------|

#### New York Right to Know:

|           |                    |            |
|-----------|--------------------|------------|
| 1336-21-6 | Ammonium Hydroxide | Listed     |
| 7732-18-5 | Water              | Not Listed |

#### Pennsylvania Right to Know:

|           |                    |            |
|-----------|--------------------|------------|
| 1336-21-6 | Ammonium Hydroxide | Listed     |
| 7732-18-5 | Water              | Not Listed |

California Proposition 65: Not determined.

### SECTION 16: Other information

**Abbreviations and Acronyms:** None

**Disclaimer:**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**NFPA:** 2-0-0

**HMIS:** 2-0-0

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**End of Safety Data Sheet**