

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : Ammonium Hydroxide, 1.0N (1.0M)  
Product code : LC11080

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory and manufacturing use only

#### 1.3. Details of the supplier of the safety data sheet

LabChem Inc  
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court  
Zellienople, PA 16063 - USA  
T 412-826-5230 - F 724-473-0647  
[info@labchem.com](mailto:info@labchem.com) - [www.labchem.com](http://www.labchem.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Skin corrosion/irritation Category 2 H315  
Serious eye damage/eye irritation Category 2A H319  
Hazardous to the aquatic environment - Acute Hazard Category 3 H402  
Full text of H statements : see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H402 - Harmful to aquatic life

Precautionary statements (GHS-US) : P264 - Wash exposed skin thoroughly after handling  
P273 - Avoid release to the environment  
P280 - Wear protective gloves, eye protection  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P332 + P313 - If skin irritation occurs: Get medical advice/attention  
P337 + P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash it before reuse  
P501 - Dispose of contents/container to comply with local, state and federal regulations

#### 2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substance

Not applicable

# Ammonium Hydroxide, 1.0N (1.0M)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 3.2. Mixture

| Name                    | Product identifier | %     | GHS-US classification                                                                                                                      |
|-------------------------|--------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Water                   | (CAS No) 7732-18-5 | 98.28 | Not classified                                                                                                                             |
| Ammonium Hydroxide, ACS | (CAS No) 1336-21-6 | 1.72  | Acute Tox. 4 (Oral), H302<br>Acute Tox. 4 (Inhalation:vapour),<br>H332<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318<br>Aquatic Acute 1, H400 |

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Gloves.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

# Ammonium Hydroxide, 1.0N (1.0M)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
- Hygiene measures : Wash exposed skin thoroughly after handling.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep cool. Keep container closed when not in use.
- Incompatible products : Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

| Ammonium Hydroxide, ACS (1336-21-6) |                          |          |
|-------------------------------------|--------------------------|----------|
| ACGIH                               | ACGIH TWA (mg/m³)        | 17 mg/m³ |
| ACGIH                               | ACGIH STEL (mg/m³)       | 24 mg/m³ |
| OSHA                                | OSHA PEL (TWA) (mg/m³)   | 35 mg/m³ |
| OSHA                                | OSHA PEL (TWA) (ppm)     | 50 ppm   |
| IDLH                                | US IDLH (ppm)            | 300 ppm  |
| NIOSH                               | NIOSH REL (TWA) (mg/m³)  | 18 mg/m³ |
| NIOSH                               | NIOSH REL (TWA) (ppm)    | 25 ppm   |
| NIOSH                               | NIOSH REL (STEL) (mg/m³) | 27 mg/m³ |
| NIOSH                               | NIOSH REL (STEL) (ppm)   | 35 ppm   |
| Water (7732-18-5)                   |                          |          |
| Not applicable                      |                          |          |

#### 8.2. Exposure controls

- Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.
- Personal protective equipment : Avoid all unnecessary exposure. Gloves. Safety glasses.



- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear appropriate mask.
- Other information : Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Color : Colorless
- Odor : Ammonia odour
- Odor threshold : No data available
- pH : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available

# Ammonium Hydroxide, 1.0N (1.0M)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

|                                             |                     |
|---------------------------------------------|---------------------|
| Flash point                                 | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas)                   | : Non flammable.    |
| Vapor pressure                              | : No data available |
| Relative vapor density at 20 °C             | : No data available |
| Relative density                            | : No data available |
| Specific gravity / density                  | : 0.99 g/ml         |
| Solubility                                  | : No data available |
| Log Pow                                     | : No data available |
| Auto-ignition temperature                   | : No data available |
| Decomposition temperature                   | : No data available |
| Viscosity, kinematic                        | : 1.04 cSt          |
| Viscosity, dynamic                          | : No data available |
| Explosion limits                            | : No data available |
| Explosive properties                        | : No data available |
| Oxidizing properties                        | : No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids.

### 10.6. Hazardous decomposition products

Gaseous ammonia.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Not classified

| Ammonium Hydroxide, ACS (1336-21-6) |                           |
|-------------------------------------|---------------------------|
| LD50 oral rat                       | 350 mg/kg                 |
| ATE US (oral)                       | 350.000 mg/kg body weight |
| ATE US (vapors)                     | 10.714 mg/l/4h            |

| Water (7732-18-5) |                             |
|-------------------|-----------------------------|
| LD50 oral rat     | ≥ 90000 mg/kg               |
| ATE US (oral)     | 90000.000 mg/kg body weight |

|                                   |                                  |
|-----------------------------------|----------------------------------|
| Skin corrosion/irritation         | : Causes skin irritation.        |
| Serious eye damage/irritation     | : Causes serious eye irritation. |
| Respiratory or skin sensitization | : Not classified                 |
| Germ cell mutagenicity            | : Not classified                 |
| Carcinogenicity                   | : Not classified                 |
| Reproductive toxicity             | : Not classified                 |

# Ammonium Hydroxide, 1.0N (1.0M)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

|                                                     |                                                                     |
|-----------------------------------------------------|---------------------------------------------------------------------|
| Specific target organ toxicity (single exposure)    | : Not classified                                                    |
| Specific target organ toxicity (repeated exposure)  | : Not classified                                                    |
| Aspiration hazard                                   | : Not classified                                                    |
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |
| Symptoms/injuries after skin contact                | : Causes skin irritation.                                           |
| Symptoms/injuries after eye contact                 | : Causes serious eye irritation.                                    |

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Harmful to aquatic life.

| Ammonium Hydroxide, ACS (1336-21-6) |                              |
|-------------------------------------|------------------------------|
| LC50 fish 1                         | 0.16 - 1.1 mg/l (LC50; 96 h) |
| EC50 Daphnia 1                      | 2.08 mg/l (LC50; 48 h)       |

### 12.2. Persistence and degradability

| Ammonium Hydroxide, 1.0N (1.0M)     |                                                                                                                                                            |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Persistence and degradability       | Not established.                                                                                                                                           |
| Ammonium Hydroxide, ACS (1336-21-6) |                                                                                                                                                            |
| Persistence and degradability       | Readily biodegradable in water. Ozonation in water. Biodegradable in the soil. No test data on mobility of the components available. Ozonation in the air. |
| Water (7732-18-5)                   |                                                                                                                                                            |
| Persistence and degradability       | Not established.                                                                                                                                           |

### 12.3. Bioaccumulative potential

| Ammonium Hydroxide, 1.0N (1.0M)     |                                  |
|-------------------------------------|----------------------------------|
| Bioaccumulative potential           | Not established.                 |
| Ammonium Hydroxide, ACS (1336-21-6) |                                  |
| Log Pow                             | -1.3                             |
| Bioaccumulative potential           | Bioaccumulation: not applicable. |
| Water (7732-18-5)                   |                                  |
| Bioaccumulative potential           | Not established.                 |

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

|                              |                                       |
|------------------------------|---------------------------------------|
| Effect on the global warming | : No known effects from this product. |
| GWPmix comment               | : No known effects from this product. |
| Other information            | : Avoid release to the environment.   |

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|                                |                                                                                                                                                              |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations. |
| Ecology - waste materials      | : Avoid release to the environment.                                                                                                                          |

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT  
Not regulated

# Ammonium Hydroxide, 1.0N (1.0M)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

|                         |                  |       |
|-------------------------|------------------|-------|
| Ammonium Hydroxide, ACS | CAS No 1336-21-6 | 1.72% |
|-------------------------|------------------|-------|

#### Ammonium Hydroxide, ACS (1336-21-6)

|                                                              |         |
|--------------------------------------------------------------|---------|
| RQ (Reportable quantity, section 304 of EPA's List of Lists) | 1000 lb |
|--------------------------------------------------------------|---------|

#### 15.2. International regulations

##### CANADA

#### Ammonium Hydroxide, 1.0N (1.0M)

|                      |                                                                               |
|----------------------|-------------------------------------------------------------------------------|
| WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |
|----------------------|-------------------------------------------------------------------------------|

#### Ammonium Hydroxide, ACS (1336-21-6)

|                      |                              |
|----------------------|------------------------------|
| WHMIS Classification | Class E - Corrosive Material |
|----------------------|------------------------------|

#### Water (7732-18-5)

|                      |                                                                 |
|----------------------|-----------------------------------------------------------------|
| WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |
|----------------------|-----------------------------------------------------------------|

##### EU-Regulations

No additional information available

##### National regulations

No additional information available

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

### SECTION 16: Other information

Revision date : 11/16/2016

Other information : None.

Full text of H-phrases: see section 16:

|      |                                         |
|------|-----------------------------------------|
| H302 | Harmful if swallowed                    |
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation                  |
| H318 | Causes serious eye damage               |
| H319 | Causes serious eye irritation           |
| H332 | Harmful if inhaled                      |
| H400 | Very toxic to aquatic life              |
| H402 | Harmful to aquatic life                 |

NFPA health hazard

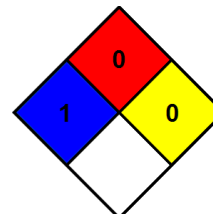
: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard

: 0 - Materials that will not burn.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



# Ammonium Hydroxide, 1.0N (1.0M)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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### HMIS III Rating

|                     |                                                                                                                                                                                     |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Health              | : 1 Slight Hazard - Irritation or minor reversible injury possible                                                                                                                  |
| Flammability        | : 0 Minimal Hazard - Materials that will not burn                                                                                                                                   |
| Physical            | : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives. |
| Personal protection | : B<br>B - Safety glasses, Gloves                                                                                                                                                   |

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