

# Safety Data Sheet

Ammonium Hydroxide

Revision Date: 07/22/19

## 1. PRODUCT AND COMPANY IDENTIFICATION

<b>1.1 Product identifier</b>	Trade name: Ammonium Hydroxide Product code(s): 3535-16, 3535-G
<b>1.2 Relevant identified uses</b>	Laboratory Reagent
<b>Supplier:</b>	Astral Diagnostics Inc.  800-441-0366 Technical Service Monday-Friday: 8:00 -5:00 PM
<b>Synonym:</b>	None.
<b>Material uses:</b>	Laboratory Reagent.
<b>Validation date:</b>	12/11/2013
<b>In case of emergency:</b>	800-424-9300 CHEMTREC (USA) 24 Hours/Day: 7 Days/Week

## 2. HAZARDS IDENTIFICATION

### Emergency Overview:

#### 2.1 Classification of the substance or mixture

##### GHS-US Classification

Acute Toxicity (Cat 4)  
Skin Corrosive (Cat 1C)  
Eye Damage (Cat 1)

#### 2.2 Label elements

##### GHS-US labeling

##### Hazard Pictograms:



**Signal Word:** Danger

##### Hazard Statements

**H302:** Harmful if swallowed  
**H314:** Causes severe skin burns and eye damage  
**H332:** Harmful if inhaled  
**H400:** Very toxic to aquatic life

##### Precautionary Statements

**P264:** Wash hands, forearms and face thoroughly after handling  
**P273:** Avoid release to the environment  
**P280:** Wear protective gloves/protective clothing/eye protection/face protection

**P301+P330+P331:** IF SWALLOWED: rinse mouth. Do NOT induce vomiting

**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.

### 2.3 Other hazards

None

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS number	% by volume
Ammonium Hydroxide	1336-21-6	100

## 4. 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:** *Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.*

**First-aid measures after skin contact:** Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.

**First-aid measures after eye contact:** 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.

**First-aid measures after ingestion:** Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

## 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

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

## 6. ACCIDENTAL RELEASE MEASURES

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

#### 6.1.1. For non-emergency personnel

Protective equipment: Gloves. Safety glasses. Combined gas/dust mask with filter type B/P3.

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

## 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. Do not breathe mist, vapors, spray. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.

**Hygiene measures:** Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

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

**Technical measures:** Comply with applicable regulations.

**Storage conditions:** Keep container closed when not in use. Protect from sunlight. Store in a well-ventilated place.

**Incompatible products:** Strong acid. Silver nitrate. Strong bases

**Incompatible materials:** Sources of ignition. Direct sunlight

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult local authorities for acceptable exposure limits.

Component	Source	Type	Value	Note
Aluminum Hydroxide	ACGIH	TWA	17 mg/m <sup>3</sup>	
	OSHA	TWA	35 mg/m <sup>3</sup> , 50 ppm	
	NIOSH	TWA	18 mg/m <sup>3</sup> , 25 ppm	
	NIOSH	STEL	27 mg/m <sup>3</sup> , 35 ppm	

**Personal protective equipment:** Safety glasses. Gloves. Protective clothing. High gas/vapor concentration: gas mask with filter type B.

**Hand protection:** Wear protective gloves.

**Eye protection:** Chemical goggles or face shield.

**Skin and body protection:** Wear suitable protective clothing.

**Respiratory protection:** Wear appropriate mask. Gas mask with filter type B.

**Other information:** Do not eat, drink or smoke during use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** liquid

**Flash Point:** NA

**pH:** ~11

**Melting/freezing point:** NA

**Vapor pressure:** NA

**Odor threshold:** NA

**VOC:** NA

**Color:** colorless

**Odor:** Negligible

**Boiling/condensation point:** 27°C

**Relative density:** 0.88-0.91

**Vapor density:** NA

**Evaporation rate:** NA

**Solubility:** Soluble in the following materials: water

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

On heating: release of toxic/combustible gasses (ammonia). Concentrated solution violent to explosive reaction with many compounds

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Reacts vigorously with strong oxidizers and acids

### 10.4. Conditions to avoid

High temperatures.

### 10.5. Incompatible materials

May react violently with acids.

### 10.6. Hazardous decomposition products

Gaseous ammonia. Fume. Carbon monoxide. Carbon dioxide

## 11. TOXICOLOGICAL INFORMATION

### Water (7732-18-5)

LD50 oral rat  $\geq 90000$  mg/kg

ATE US (oral) 90000.000 mg/kg body weight

### Aluminum Hydroxide (1336-21-6)

LD50 oral rat 350 mg/kg

ATE US oral 350 mg/kg body weight

ATE US vapors 1.0714 mg/l/4h

**Skin corrosion/irritation:** Causes severe skin burns and eye damage

**Serious eye damage/irritation:** Causes severe eye damage

**Respiratory or skin sensitization:** Not classified

**Germ cell mutagenicity:** Not classified

**Carcinogenicity:** Not Classified

## 12. ECOLOGICAL INFORMATION

### Toxicity:

Aluminum Hydroxide		
	LC 50 fish 1	0.16-1.1 mg/l
	EC50 Daphnia 1	2.08 mg/l

**Persistence and degradability:** no data available

**Bioaccumulative potential:** no data available

**Mobility in soil:** no data available

**PBT and vPvB assessment:** no data available

**Other adverse effects:** no data available

## 13. DISPOSAL CONSIDERATIONS

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

## 14. TRANSPORT INFORMATION

**DOT (US)**

UN number UN2672, 8, III

Proper shipping name: Aluminum Solution

**15. REGULATORY INFORMATION****15.1 US Federal Regulations**

Ammonium Hydroxide

Listed on the US TSCA inventory

SARA Section 311/312 Hazard Classes- Health hazard acute toxicity, skin corrosion or irritation, serious eye damage or eye irritation

RQ 1000lb

**15.2 International Regulations (WHMIS Classifications)**

No additional information available

**15.3 California Proposition 65**

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

**16. OTHER INFORMATION****National Fire Protection Association (U.S.A.)****Notice to reader**

This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labeling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Astral Diagnostics, Inc be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.