

# MATERIAL SAFETY DATA SHEET

## Section I – Product and Company Identification

**Ouachita Fertilizer Company, LLC**  
**PO Box 4540**  
**Monroe, LA 71211**  
**(318)388-0400**

**Product Name: Aqua Ammonia**

**Emergencies:** (800) 424-9300 (Chemtrec)  
Health Emergencies, Contact your local Poison Center

**Common Name:** Aqua Ammonia/Ammonium Hydroxide

**Formula:** NH<sub>4</sub>OH/H<sub>2</sub>O

**Synonym:** Aqueous Ammonia/Ammoniacal Liquid

**Use:** Industrial

## Section II – Composition/Information On Ingredients

**Chemical Name(s):** Aqua Ammonia/Ammonium Hydroxide

**CAS NO.:** 1336-21-6

OSHA PEL		TLV – TWA		STEL		CEIL		% by weight
mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	
	25(1)		25(1)		35(1)			18-30(1)

## Section III – Hazard Identification

### Potential Acute

#### Health Effects:

Inhalation of 500 PPM Ammonia considered immediately dangerous to life and health (OSHA).

#### Eyes and Skin:

EYES: Liquid: Intensely irritating in extreme, corneal ulceration or blindness.

SKIN: Liquid: Corrosive burns or blister formation. Gas: Irritates moist skin.

#### Inhalation:

Ammonia vapors are highly irritating to throat at approximately 400 PPM. Causes edema, dyspnoea, bronchospasm, chest pain, pink frothy sputum. Inhalation of 500 PPM Ammonia considered immediately dangerous to life and health (OSHA).

#### Ingestion:

As with other corrosive alkalis: Severe burning of gullet, stomach, mouth, and throat. Possible death from shock or asphyxia. Human lethal dose not established: Any amount can be dangerous.

### Potential Chronic

#### Health Effects:

No other potential chronic health effects known.

#### Carcinogenicity

#### List:

IARC Monograph: No NTP: No OSHA: No

#### **Section IV – First Aid Measures**

- Eyes:** Immediately flood with large amounts of water for at least 15 minutes. Seek prompt medical attention.
- Skin:** Quickly remove contaminated clothing. Immediately wash area with large amounts of water for at least 15 minutes. Seek prompt medical attention. Wash clothing before re-use.
- Ingestion:** Do not induce vomiting. Encourage victim to drink large amounts of water, substituting as available, diluted vinegar or citrus juices. Seek prompt medical attention.
- Inhalation:** Use respiratory protection as necessary and remove to fresh air at once. If breathing stops, give artificial respiration. Seek prompt medical attention.

#### **Section V – Fire fighting Measures**

**Flash Point:** None                      **Autoignition Temperature:** 651° C (1240° F)  
(Based on Ammonia)

**Lower Explosive Limit:** Lower: 16%  
(Based on ammonia)

**Upper Explosive Limit:** Upper: 25%  
(Based on ammonia)

**Unusual Fire and Explosion Hazards:** (Based on Ammonia). Ammonia increases the fire hazard from other combustible materials, including oil. Flammable limits are broadened by increasing temperature. Ammonia vapor in the range of 16-25% in air can explode on contact with ignition sources.

#### **Extinguishing**

**Media:** Fire extinguishing agents recommended: Water spray  
Fire extinguishing agents to avoid: CO2 may react violently.

#### **Special Firefighting Procedures and**

**Equipment:** Wear full protective clothing. Stop flow of gas before extinguishing fire. Use water spray to keep fire-exposed containers cool.

#### **Section VI – Accidental Release Measures**

**Small Spill:** Remain upwind of spill or leak. Evacuate immediate areas and wear appropriate protective equipment depending on the concentration of ammonia in immediate area.

**Large Spill:** In unknown concentrations SCBA must be worn. Keep ignition sources away.

**Release Notes:** If spill could potentially enter any waterway, including intermittent dry creeks, contact the local authorities. If in the U.S. contact the US Coast Guard National Response center toll free number 800-424-8802. In case of accident or road spill notify: Chemtrec in USA at 800-424-9300.

**Comments:** See Section XIII for disposal information and Section XV for regulatory requirements. Large and small spills may have a broad definition depending on the user's handling system. Therefore, the spill category must be defined at the point of release by technically qualified personnel.

## **Section VII – Handling and Storage:**

- Ventilation:** Provide ventilation sufficient to maintain exposure below TW A/TLV/PEL (based on ammonia).
- Handling:** Avoid all contact of liquid with the body. Minimize gas contact. good maintenance to prevent leaks. Keep away from heat and open flames. Use good process control.
- Storage:** Preferably stored outside, otherwise in cool, dry well-ventilated non-combustible location, away from all possible sources of ignition and oxidizers. Protect containers from heat, corrosion. Storage and physical damage – in locating storage areas, consideration should be given to health and fire hazards, population density, and proximity of water supplies. Also, closed containers should be provided with safety relief valves, as necessary.

## **Section VIII – Exposure Controls/Personal Protection**

- Engineering Controls:** Provide ventilation sufficient to maintain exposure below TWA/TLV/PEL (based on ammonia).
- Personal Protection:**
- Eye Protection:** Wear hard hat, chemical safety goggles, full-face shield if eyes are not covered by respiratory device. Do not wear contact lenses.
- Protective Clothing:** Wear rubber apron, impervious protective clothing and rubber boots for routine product use. Specialized handling – alkali-resistant gloves. For leak or spill or other emergency, use full protective clothing.
- Respiratory Protection:** Use an approved NIOSH ammonia respirator. (Special: refers to a specific cartridge or canister for NH<sub>3</sub> gas.) Up to 100 PPM chemical cartridge respirator, special, supplied-air respirator, or self-contained breathing apparatus. 100 to 300 PPM, chemical cartridge respirator, special with full-face piece. Supplied-air respirator (gas mask, special supplied-air respirator, or self-contained breathing apparatus) required for exposure of 300 ppm or greater. Latter two types should have full-face piece.
- Other protective Clothing or Equip:** Provide safety shower and eye wash facility at sites of handling and storage.

## **Section IX – Physical and Chemical Properties:**

- Appearance/Color:**
- Odor:** This material at normal conditions is a clear liquid with a strong pungent ammonia odor.
- Melting Point/Range:** - 77°C
- Solubility in Water:** 100%
- Specific Gravity:** (H<sub>2</sub>O = 1): 0.897 (28-30%) at 60°F  
0.92 (18-20%) at 60°F
- Vapor Density:** (Air = 1): (NH<sub>3</sub> Gas) 0.596 (60°F, 1.56°C)
- Bulk Density:** Not Applicable
- PH:** 11.6 in a 1.0 normal solution; 4.75 @ 25°C
- Viscosity:** Not Applicable
- Boiling Point:** 36 °C
- Boiling Point/Range:** Not available

## Vapor Pressure

(mmHg): 2, 159 mmHg at 25°C

**Molecular Weight:** 35.05

**%Volatiles:** (at 20°C) 100%

**Evaporation Rate:** Not Applicable

## **Section X – Stability and Reactivity**

**Stability:** This product is stable under normal ambient conditions of temperature and pressure

### **Hazardous**

**Polymerization:** Will not occur

**Conditions to avoid:** Heating increases vapor pressure. Ammonia gas may be released  
Aqua ammonia is heated.

### **Materials to Avoid**

**(Incompatibilities):** Oxidizing materials, strong acids, halogens; avoid use of non-ferrous metals. Boron, chlorites, chromium trioxide, dimethyl sulfate, ethylene oxide, gold, mercury, nitrogen tetroxide, oleum, phos-acids.

### **Hazardous**

**Decomposition** Gaseous ammonia on heating. Normal combustion products

**Products:** of ammonia vapor are nitrogen (\*N<sub>2</sub>) and water. Oxides of Nitrogen may be produced under certain conditions.

## **Section XI – Toxicological Information**

### **Significant Routes**

**Of Exposure:** Eyes, digestive tract, respiratory tract, skin

**Toxicity to animals:** Acute Oral LD<sub>50</sub> (rat): 350mg/kg. Acute Toxicity, other routes  
LDL<sub>0</sub> (rabbit): 5 mg total NH<sub>3</sub>/kg.

### **Special Remarks**

#### **On toxicity to**

**Animals:** Bacterial genetic Toxicity In-vitro: Negative

#### **Other effects**

**On humans:** No effects known.

#### **Special remarks**

#### **On chronic effects**

**On humans:** Human lethal dose not established: Any amount can be dangerous.

#### **Special remarks**

#### **On other effects**

**On Humans:** No other effects known.

## **Section XII – Ecological Information**

**Exotoxicity:** Acute toxicity to Fish: 24-h LC<sub>50</sub>: 20 –25 mg total NH<sub>3</sub>/L. Acute  
Toxicity to Daphnia: 48-h TL<sub>m</sub>: 16 mg total NH<sub>3</sub>/L. Toxicity to  
Aquatic plants: Decline in phytoplankton population. Slightly  
Toxic to aquatic organisms as defined by USEPA.

### **Environmental**

**Fate:** No known environmental fate.

**Toxicity:** No known toxicity.

### **Degradation**

**Products:** No known degradation.

### **Section XIII – Disposal Considerations**

**Product disposal:** Disposal of ammonium hydroxide may be subject to Federal, state and local regulations.

#### **General**

**Comments:** Users of the product should review their operations in term of applicable laws and regulations, then consult with appropriate regulatory agencies before discharging or disposing of waste material of the product.

### **Section XIV – Transportation Information**

#### **USDOT**

than for solutions with more  
than 10% but not more  
than 35%

**Proper Shipping Name:** Ammonia Solutions

**Hazard Class:** 8

**Identification Number:** UN2672

**Packing Group**

**(Technical Name):** III

**Labeling/Placarding:** Corrosive

**Authorized Packaging:** DOT103, 104, 105, 109, 111, 112, 114, 115, 120  
Trucks: DOT 51, MC 306, 307, 312, 330, 331, 407, 412

**Notes:** If product exceeds the CERCLA reportable quantity, the notation “RQ” shall be added before or after the basic shipping description.

### **Section XV – Regulatory Information**

**United States:**

**SARA Hazard**

**Category:**

This product has been reviewed according to the EPA Hazard categories promulgated under Section 311 and 312 of the Superfund Amendment and Reauthorization of 1986 (SARA Title III) and is considered, under Act definitions, to meet the following categories:  
Applicable **Fire: Yes Pressure Generating: Yes Reactivity: Yes  
Acute: Yes Chronic: No**  
40 CFR Part 355–Extremely Hazardous substances: None  
40 CFR Part 370 – Hazardous Chemical Reporting: Applicable  
All intentional ingredients listed on the TSCA inventory.

**SARA Title III****Information:**

requirem

This product contains the following substances to the reporting  
ents of Title III (EPCRA) of the Superfund

Amendments and Reauthorization Act of 1986 and 40 CFR

Part

372:

Chemical	CAS No.	Percent by Weight	CERCLA RQ (lbs.)	SARA (1986) Reporting		
				311	312	313
Ammonium Hydroxide (see Note1)	1336-21-6	37.0 – 61.7 (as NH4OH)	see Note (1) 1000 lbs (100% Basis)	Yes	Yes	Yes
	2700		lbs (18% wt. Solution as NH3)			see Note 2
	1620		lbs. (30% wt. Solution as NH3)			

Note: (1) CERCLA reports Aqua Ammonia as Ammonium Hydroxide (CAS 1336-21-6)

(2) Reported as Aqueous Ammonia (CAS 7664-41-7) 18 – 30% (for SARA reporting)

**CERCLA/Superfund,****40 CFR Parts 117, 302:**

designated

notification

(1-800-424-8802)

If this product contains components subject to substances

as **CERCLA Reportable Quantity (RQ) Substances,**

it will be designated in the above table with the RQ Value in

pounds. If there is a release of **RQ Substance** to the environment,

to the National Response Center, Washington D.C.

is required.

**Section XVI – Other information****NFPA Hazard Rating:****Health 3 Fire 1 Reactivity 0 Special Hazards Corrosive****0 = Insignificant 1 = Slight 2 = Moderate 3 = High****4 = Extreme**

Although the information contained is offered in good faith, such information is expressly given without any warranty (express or implied) or any guarantee of its accuracy or sufficiency and is taken at the user's sole risk. User is solely responsible for determining the suitability of use in each particular situation. Ouachita Fertilizer Company, LLC specifically disclaims any liability whatsoever for the use of such information, including without limitation any recommendation which user may construe and attempt to apply which may infringe or violate valid patents, licenses, and/or copyright.